

**ENVIRONMENTAL MONITORING AND AUDIT REPORT**

**FOR**

**CONTRACT No. CV/2002/13**


**FILL BANK AT TUEN MUN AREA 38**

**JULY 2004**

**(Revision No. 0)**

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## **EXECUTIVE SUMMARY.**

This is the 13<sup>th</sup> monthly Environmental Monitoring and Audit (EM&A) report for Contract No. CV/2002/13 – Fill Bank at Tuen Mun Area 38. The site has been in operation as a public filling area as part of the reclamation. The site is 24 hours operated except during the Chinese New Year holidays to provide a stable outlet for public fill to serve the construction industry. This report covers the monitoring works conducted during the month of July 2004.

### **Construction Activities for the Reported Period.**

- Public fill operation.
- Operation of tipping hall.
- Hydroseeding to slope surface.

### **Air Quality Monitoring.**

Two stations (A1 and A2) have been identified as the locations for the monitoring of 24-hour and 1-hour Total Suspended Particulates (TSP). In this reporting period, the monitoring of 24-hour TSP was carried out on six occasions at A1 and A2. Monitoring of 1-hour TSP was carried out on eighteen occasions at A1 and A2. There was no exceedance to the set action or limit levels for both parameters at both stations.

### **Water Quality Monitoring.**

Water quality in terms of turbidity, dissolved oxygen, suspended solids, temperature, and salinity, was carried out on twelve occasions during flood tide and ebb tide at FM1, FM2, FC1 and FC2 in this reporting period. There was no exceedance to the set action or limit level for all parameters at all stations. Monitoring on 16.07.2004 was cancelled due to adverse weather condition.

### **Landscape Audit.**

Hydroseeding was applied to most completed slopes. There was no specific site observation regarding the landscape aspect during the reporting period.

### **Waste Management.**

189,000m<sup>3</sup> public fill was collected to the Fill Bank. 39.91t C&D waste and general refuse were disposed of at WENT Landfill. 0.472t chemical waste was collected by licensed collector on 21.07.2004.

### **Complaints and Notifications of Summonses and Successful Prosecutions.**

One complaint was received on 29.06.2004 about dust generation in the Fill Bank. The situation was rectified by the Contractor.

No complaints or notification of summonses was received this reported period.

## Site Inspections.

Four weekly site inspections were conducted on 9<sup>th</sup>, 14<sup>th</sup>, 24<sup>th</sup> and 31<sup>st</sup> July 2004. Major observations are summarised in the following table.

Observations	Actions by Contractor	Outcome
Drainage system was blocked by deposit. (14.07.2004)	Cleaned up the deposit regularly.	Deposit in the drainage was cleaned up. (31.07.2004)
Debris was observed in the sediment tanks. (31.07.2004)	To clean up the debris in the sedimentation system regularly.	To be observed in next reporting period.
The engine cover of excavator was opened during operation (31.07.2004)	To ensure all cover of excavators are closed.	To be observed in next reporting period.
Haul roads were dusty. (14.07.2004)	Sprayed more water on dusty area.	Situation improved. (24.07.2004)

An Independent Environmental Checker (IEC) audit was conducted on 14<sup>th</sup> July 2004 with the Environmental Team. Major observations are summarized in the following table.

Observations	Actions by Contractor	Outcome
Splashing generated from wet soils during transfer to the barge at the tipping hall has caused splashing into the sea.	Raised nets to retain material and instructed barges to berth as close to the seawall as possible.	To be observed in next reporting period.
Pondings were observed at various locations.	Drain away the stagnant water.	Some pondings were filled. (31.07.2004)
The wheel washing bay near the main entrance was flooded.	Maintained the drainage system to avoid flooding.	Situation rectified. (24.07.2004)
Water sprinkling was weak. Dust emission from traffic on haul roads along the western side and seafront, and haul roads to the tipping hall and sorting facility on RTT side.	Sprayed more water on dusty area	Situation improved. (24.07.2004)
The western side of the fill bank was only partially hydroseeded.	To arrange hydroseeding on that portion upon slope trimming works completed.	To be observed in next reporting period.
Vegetation, as well as stagnant water, was observed in the u-channel and sand/silt traps.	Removed the debris and vegetation to drain away stagnant water regularly.	Deposit in the drainage was cleaned up. (31.07.2004)
Trucks were travelling at speed greater than 10 km/hr which enhanced dust emission.	Reminded all truck drivers to adhere to speed limit.	No speeding vehicles was noted. (24.07.2004)

### Future Key Issues.

The tentative works activities, predicted impacts and areas of environmental concern for the following month are summarised in the following table.

Works Activities	Predicted Impacts	Proposed Mitigation Measures
Public filling operation.	- Dust - Water	- Dampening of fill materials and exposed area. - Avoid stockpiling fill materials near seafront. - Avoid spillage of fill materials into the marine water.
Operation of tipping hall for unloading public fill into barges.	- Dust - Water	- The tipping halls shall be top and 3-sides enclosed. - Avoid spillage of fill materials into the marine water.
Construction of drainage system.	- Dust - Noise - Water	- Apply water spray during excavation and earth moving. - Comply with the conditions of construction noise permit. - Treat all wastewater to acceptable prior to discharge.
Construction of new tipping hall.	- Dust - Noise - Water	- Apply water spray during excavation and earth moving. - All wastewater should be collected and treated to acceptable prior to discharge.

## **1. INTRODUCTION.**

### **1.1 Background.**

Stanger Asia Ltd. has been commissioned by the Penta-Ocean Construction Co. Ltd. to provide an Environmental Team (ET) to monitor air and water quality and audit landscape works for Contract No.CV/2002/13. The team is to take a pro-active role in all issues, which may be of environmental concern during the establishment, operation and decommissioning phases of the Fill Bank at Tuen Mun Area 38.

The Independent Environmental Checker (IEC) appointed for this project is Materialab Consultants Ltd.

In this report, the air and water quality monitoring works and landscape audit conducted for the July 2004 will be detailed and reviewed. All monitoring works were carried out in accordance to “*Agreement No, PW 01/2002 Project Profile for Fill Bank at Tuen Mun Area 38, Environmental Monitoring and Audit Manual*”.

### **1.2 Report Structure.**

The purpose of this report is to detail and review the air and water quality monitoring works and landscape audit undertaken during July 2004. The impact forecast for the next reporting month and the schedules of monitoring works for the following month is also given.

The report follows the format given below:

Section 1	Introduction and background information to the content of this report.
Section 2	This section gives the information of the project.
Section 3	This section summarises all the environmental permits and licenses.
Section 4	Summary of the EM&A requirements is presented.
Section 5	This section details the implemented mitigation measures.
Section 6	Details monitoring results.
Section 7	Audit the monitoring results.
Section 8	The status for solid and liquid waste management for the site is overviewed.
Section 9	Complaints, notifications of summons and successful prosecutions are summarized.
Section 10	This section gives the predicted impacts of the construction activities.
Section 11	This section gives a conclusion in relation to all monitoring activities.

## **2. PROJECT INFORMATION.**

### **2.1 Site Description.**

The works mainly comprise the construction of temporary storm water system, setting up of C&D material loading/unloading facilities, setting up/ refurbishing site facilities, stockpiling of 4.9 million m<sup>3</sup> of public fill, and decommissioning of the temporary fill bank.

The site layout plan is shown in Figure 2.1.

### **2.2 Project Organization.**

Mr. L.M. Chan is the Engineer's Representative for the Civil Engineering Department, Government of the HKSAR. (Tel: 2762 5602, Fax: 2714 0113).

The Independent Environmental Checker (IEC) for this project is headed by Mr. Joseph Poon - Manager of Materialab Consultants Ltd. (Tel: 2450 8238, Fax: 2450 6138).

Mr. Lok Wah Fung is the Site Agent for Penta-Ocean Construction Co., Ltd. (Tel: 2491 1584, Fax: 2496 0433).

The Environmental Team (ET) for the project is Stanger Asia Ltd. The team is headed by Mr Chris Shenfield – Senior Environmental Scientist. (Tel: 2682 1203, Fax: 2682 0046).

The Organization Chart with the key personnel contacts names and telephone numbers is given in Appendix I.

### **2.3 Construction Programme.**

The overall construction programme is given in Appendix IX. Details of the construction activities are listed below.

- Site clearance;
- Construction of storm water drainage system;
- Stockpiling of 4.9 million m<sup>3</sup> of public fill;
- Construction of landscape works; and
- Removal of stockpiled public fill.



### 3. ENVIRONMENTAL PERMITS AND LICENSES.

The summary of the status of all environmental permits, licenses and notification for this project as at July 2004 is summarized in the following table.

**Table 3.1 Summary of the Environmental Permits and Licenses**

Description	Licence/Permit No.	Date of Issue	Date of Expiry	Status
Environmental Permit	EP-153/2003	13-Feb-03	--	Superseded
Registration of Chemical Waste Producer	WPN5296-421-P2800-03	05-Aug-03	--	Issued
Amended Environmental Permit	EP-153/2003/A	30-Oct-03	--	Issued
Construction Noise Permit	GW-TW0143-04	15-May-04	14-Nov-04	Issued

### 4. SUMMARY OF EM&A REQUIREMENTS.

#### 4.1 Air Quality.

##### *Monitoring Location.*

The project has two designated locations (A1 & A2) for the monitoring of air quality. A1 is a fixed location in the vicinity of the site office to monitor the TSP levels at River Trade Terminal and A2 is a movable location to the western boundary of the site that is designed to move as works progress. The air monitoring locations are shown in Figure 4.1.

**Table 4.1 Coordinates of Air Quality Monitoring Stations**

Station	HK Metric Grid – Easting	HK Metric Grid - Northing
A1	811368	825593
A2	810812*	825096*

\* - Coordinates of present location.

##### *Methodology*

Measurement of 24-hour and 1-hour TSP levels were carried out in accordance to the high volume sampling method as set out in the Title 40 of the Code of Federal Regulations, Chapter 1 (Part 50). When positioning the high volume samplers, the following requirements have been observed:

- a horizontal platform with appropriate support to secure the high volume sampler against gusty wind, should be provided;
- horizontal distance between the high volume samplers and an obstacle, such as buildings, must be at least twice the height of the obstacle protruding above the high volume samplers;
- a minimum separation of 2 m should be provided from walls, parapets, and penthouses for rooftop high volume samplers;
- a minimum separation of 2 m should be provided from any supporting structure measured horizontally;
- there should not be any furnace or incinerator flues nearby;

- there should be unrestricted airflow around the high volume samplers;
- a minimum separation of 20 m should be provided from the dripline;
- any wire fence and gate employed to protect the high volume samplers should not cause any obstruction during monitoring.

All relevant data including temperature, pressure, weather conditions, elapsed-timer meter reading for the start and finish of the sampling period, identification and weight of the filter paper, and other special phenomena were recorded.

*Monitoring Equipment and Calibration Details.*

Andersen GMW Model GS2310 high volume samplers were used to carry out the monitoring of 24-hour and 1-hour TSP. The high volume sampler is in compliance with the specifications as listed in the Environmental Schedule, given below:

- 0.6 – 1.7 m<sup>3</sup>/min (20-60 SCFM) adjustable flow range;
- equipped with a timing / control device with 5 minutes accuracy over 24 hours operations;
- installed with elapsed-time meter with 2 minutes accuracy over 24 hours operations;
- capable of providing a minimum exposed area of 406 cm<sup>2</sup> (63 in<sup>2</sup>);
- flow control accuracy: 2.5% deviation over 24-hr sampling period;
- equipped with shelter to protect the filter and sampler;
- incorporated with an electronic mass flow rate controller or other equivalent devices;
- equipped with a flow recorder for continuous monitoring;
- provided with peaked roof inlet, incorporated with manometer;
- able to hold and seal the filter paper to the sampler housing at horizontal position;
- easy to change filter; and
- capable of operating continuously for 24-hr period.

The high volume sampler is calibrated at bi-monthly intervals. The calibration kit (Andersen Model G2535) comprising pressure plates and a transfer standard is traceable to the internationally recognized standard. Calibration records for the high volume sampler is given in Appendix II of this report.

*Laboratory Measurement.*

Laboratory measurements were carried out in Stanger Asia Ltd. own HOKLAS accredited laboratory with constant temperature and humidity control, and equipped with necessary measuring and conditioning instruments.

Clean filter papers of size 8”x10” with no pinholes were labelled before sampling. They were conditioned in a dessicator with less than 50% relative humidity for over 24 hours and pre-weighed before use for sampling.

After sampling, the filter papers loaded with dust were kept in a clean and tightly sealed plastic bag. The filter papers were then returned to the laboratory for reconditioning in the dessicator with less than 50% relative humidity

followed by accurate weighing on an electronic balance regularly calibrated against a traceable standard and readable to 0.1 mg.

Stanger Asia Ltd. operates comprehensive quality assurance and quality control programmes. For QA/AC procedures, all filters were equilibrated and weighed repeatedly until the difference of two consecutive results was less than 0.5 mg.

*Monitoring Parameters Frequency.*

**Table 4.2 Air Quality Monitoring Frequency**

Monitoring Locations	Parameter	Frequency
A1 & A2	24-hr TSP	Once in every six days
	1-hr TSP	Three times in every six days

*Action and Limit Levels.*

The Action levels for air quality monitoring were established from the impact monitoring data of Contract No. CV/2000/01 prior to the commencement of the fill bank utilising the criteria laid out in *section 4.7* of the EM&A Manual for the project. The Limit levels for air quality monitoring has been set in line with statutory guidelines for air quality in Hong Kong. Action and Limit levels for both 24-hour and 1-hour TSP are given in the following table.

**Table 4.3 Action and Limit Levels for the Project**

Parameter Monitored	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
1-hour TSP	344	500
24-hour TSP	192	260

**4.2 Water Quality.**

*Monitoring Locations.*

The EM&A Manual produced for this project has proposed two monitoring stations (FM1 & FM2) and two control stations (FC1 & FC2) for the carrying out of water quality monitoring. Control Station FC1 will act as upstream control station for the mid-ebb tide with control station FC2 acting as upstream control stations for the mid-flood tide.

The designated monitoring stations are shown in Figure 4.2.

*Methodology.*

Measurements are taken at three water depths, namely 1m below water surface, mid-water and 1m above seabed at both mid-flood and mid-ebb tides, except where the water depth less than 6m, when the mid-depth station may be omitted. Should the water depth have been less than 3m, only the mid-depth was monitored.

Two measurements of turbidity, dissolved oxygen (mg/L), dissolved oxygen (% saturation) and temperature at each depth of each station is taken. The probes

are removed from the water after the first measurement and then redeployed for the second measurement. If the difference in value between the first and second reading of each set is more than 25% of the value of the first reading, the readings are discarded and further readings taken. Replicate samples of suspended solids measurements are taken at each depth and at each water quality monitoring and control station. The samples are kept in a chilled condition during delivery to the laboratory and before commencement of analysis. For the purpose of evaluating the water quality, all values for suspended solids and turbidity shall be depth-averaged.

During monitoring works the following shall also be recorded:

- monitoring location;
- depth of water;
- time;
- weather conditions including ambient temperature;
- water temperature;

#### *Monitoring Equipment.*

The following equipment was employed for routine water quality monitoring.

- Dissolved Oxygen meter: YSI model 58 with stirrer
- Turbidity meter: Hach 2100P
- Echo sounder: Hummingbird 100SX
- Water sampler: Kahlisco 135WB203
- GPS receiver: Trimble NT2002D
- Thermometer: YSI model 58

#### *Monitoring Equipment Calibration Details.*

All on-site monitoring equipment was calibrated three-monthly at Stanger Asia's HOKLAS accredited laboratory. An on-site calibration check was carried out prior to the taking of measurements in accordance with standard water quality monitoring procedures.

Equipment calibration details were given in Appendix II.

#### *Laboratory Analysis.*

The laboratory measurements of suspended solids were carried out at Stanger Asia Limited, a HOKLAS accredited laboratory in accordance with Method No. 2540D 17<sup>th</sup> Edition of APHA.

Stanger Asia operates a comprehensive quality assurance and quality control programmes for QA/AC procedures in accordance with the requirements of HOKLAS accreditation, all filters were equilibrated and weighted repeatedly until the difference of two consecutive results is less than 0.5 mg.

*Monitoring Parameters and Frequency.*

**Table 4.4 Water Quality Monitoring Frequency**

Monitoring Locations	Monitoring Parameters	Frequency	Requirements
Designated Control Stations: FC1 & FC2.	Temperature, Salinity, Dissolved Oxygen,	Three days per week.	At three depths during mid-ebb and mid-flood tides.
Designated Monitoring Stations: FM1 & FM2.	Turbidity, Suspended Solids.		

*Action and Limit Levels.*

The Action and Limit levels for water quality monitoring were established from the impact monitoring data of Contract No. CV/2000/01 prior to the commencement of the fill bank utilising the criteria laid out in *section 6.8* of the EM&A Manual for the project.

**Table 4.5 Action and Limit Level for Water Quality**

Parameter	Action level	Limit level
Dissolved Oxygen in mg/L.		
Surface & Middle	<4.78mg/L	<4mg/L
Bottom.	<4.16mg/L	<2mg/L
Suspended Solids (SS) in mg/L (depth-averaged)	>120% of upstream control station's SS at the same time of the same day.	>130% of upstream control station's SS at the same tide of the same day .
Turbidity (Tby) in NTU	>120% of upstream control station's Tby at the same tide of the same day.	>130% of upstream control station's Tby at the same tide of the same day.

All the figures given in the table are used for reference only and the EPD may amend the figures whenever necessary.

**4.3 Event and Action Plans.**

The Event and Action Plans for air and water are attached in Appendix III of this report.

**5. IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES.**

The contractor implemented various environmental mitigation measures as recommended in the Project Profile and Environmental Permit. The implementation status is attached in Appendix IV and summarised as follows:

- Wheel washing facilities were provided at the exit point of the site and the wheel washing bay was cleared regularly.
- Slopes were compacted as far as practicable.
- Site accesses were covered with concrete.

- Waste collection points were maintained and cleaned on a regular basis.
- Hoarding was erected along Lung Mun Road and near River Trade Terminal.
- Some oil drums were placed in drip trays.
- Water trucks and road sweepers were in operation.
- Buffer trees were planted.
- Speed limit warning signs were posted.
- Sea blocks were placed along the seawall and debris was removed regularly.
- Hydroseeding was in progress.

## 6. MONITORING RESULTS.

### 6.1 Completed Monitoring Works.

Table 6.1 gives the completed monitoring works for the reported period.

**Table 6.1 Completed Monitoring Works for July 2004**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				July 1	2	3
					1 – hr TSP 24 – hr TSP WQM (Ebb: 12:49) (Flood: 20:15)	
4	5	6	7	8	9	10
		WQM (Ebb: 16:05) (Flood: 08:58)		1 – hr TSP 24 – hr TSP WQM (Ebb: 17:38) (Flood: 10:55)	Site Inspection	WQM (Ebb: 07:56) (Flood: 13:30)
11	12	13	14	15	16	17
	WQM (Ebb: 09:59) (Flood: 16:36)		1 – hr TSP 24 – hr TSP WQM (Ebb: 11:23) (Flood: 18:44) Site Inspection			
18	19	20	21	22	23	24
		1 – hr TSP 24 – hr TSP WQM (Ebb: 14:58) (Flood: 07:48)		WQM (Ebb: 16:06) (Flood: 09:13)		WQM (Ebb: 17:26) (Flood: 10:58) Site Inspection
25	26	27	28	29	30	31
	1 – hr TSP 24 – hr TSP WQM (Ebb: 07:37) (Flood: 14:05)		WQM (Ebb: 09:55) (Flood: 17:33)		WQM (Ebb: 11:47) (Flood: 19:21)	Site Inspection Landscape Audit 1 – hr TSP 24 – hr TSP

- Notes:
1. 24 –hr TSP (monitored once every 6 days) at monitoring locations A1 and A2.
  2. 1 hour TSP (monitored three times every six days when highest level of dust generation expected) at monitoring locations A1 and A2.
  3. WQM - water quality monitoring three times per week, on mid-flood and mid-ebb tides. Days of monitoring to be separated by at least 36 hours. Monitoring locations FC1, FM1, FM2 & FC2.
  4. Site inspections to be carried out once per week.
  5. Auditing of landscape works to be carried out once per month.

## 6.2 Air Quality Monitoring.

Impact monitoring of 24-Hour TSP was conducted on six occasions at A1 and A2, with the monitoring of 1-Hour TSP being conducted on eighteen occasions at A1 and A2 this reported period.

The monitoring records for 24-hour and 1-hour TSP are given in the following table. Details of monitoring results are given in Appendix V. The results are presented graphically in Figures 6.1 and 6.2.

**Table 6.2 Results of 24-hour TSP Monitoring**

Date	A1, $\mu\text{g}/\text{m}^3$	Exceedance (Y/N)	A2, $\mu\text{g}/\text{m}^3$	Exceedance (Y/N)
02/07/2004	73	N	61	N
08/07/2004	120	N	93	N
14/07/2004	172	N	38	N
20/07/2004	45	N	148	N
26/07/2004	106	N	136	N
31/07/2004	73	N	30	N
Action Level	192 $\mu\text{g}/\text{m}^3$			
Limit Level	260 $\mu\text{g}/\text{m}^3$			

**Table 6.3 Results of 1-hour TSP Monitoring**

Date	A1, $\mu\text{g}/\text{m}^3$	Exceedance (Y/N)	A2, $\mu\text{g}/\text{m}^3$	Exceedance (Y/N)
02/07/2004	252	N	187	N
02/07/2004	199	N	43	N
02/07/2004	242	N	58	N
08/07/2004	221	N	90	N
08/07/2004	137	N	223	N
08/07/2004	147	N	209	N
14/07/2004	117	N	112	N
14/07/2004	234	N	106	N
14/07/2004	172	N	170	N
20/07/2004	66	N	97	N
20/07/2004	40	N	90	N
20/07/2004	115	N	138	N
26/07/2004	44	N	164	N
26/07/2004	42	N	179	N
26/07/2004	70	N	209	N
31/07/2004	38	N	108	N
31/07/2004	31	N	65	N
31/07/2004	86	N	35	N
Action Level	344 $\mu\text{g}/\text{m}^3$			
Limit Level	500 $\mu\text{g}/\text{m}^3$			

Wind speed and direction data from the wind station is given in Appendix XI.

### 6.3 Water Quality Monitoring.

Water quality monitoring was carried out on twelve occasions during flood tide and ebb tide at FM1, FM2, FC1 and FC2.

Results for water quality monitoring are summarised in the following tables. Details of monitoring results are presented in Appendix VI. Graphical presentations of the results are shown in Figure 6.3 – Figure 6.10.

**Table 6.4 Summary of Water Quality Monitoring Data**

Sample Location	Surface & Middle Averaged Dissolved Oxygen (Range), mg/L	Bottom Averaged Dissolved Oxygen (Range), mg/L	Depth Averaged Turbidity (Range), NTU	Depth Averaged Suspended Solids (Range), mg/L
FM1	6.75 (6.26-7.34)	6.41 (5.82-7.18)	4.65 (1.17-14.24)	8.50 (4.3-16.5)
FM2	6.74 (6.28-7.29)	6.40 (5.62-7.15)	4.41 (1.38-16.70)	8.10 (4.0-16.3)
FC1	6.71 (6.26-7.25)	6.35 (5.56-7.14)	4.79 (1.83-16.31)	8.80 (4.5-17.5)
FC2	6.67 (6.19-7.23)	6.29 (5.60-7.08)	4.41 (1.64-11.21)	8.60 (3.7-15.7)

## 7. AUDIT REPORT.

### 7.1 Air Quality Monitoring.

No exceedance to set action or limit levels for either 24 or 1-Hour TSP monitoring was recorded at air monitoring station A1 and A2 in this reported period.

### 7.2 Water Quality Monitoring.

There was no exceedance to the Action and Limit Level for water quality parameters in this reported period.



### 7.3 Site Inspections.

Four weekly site inspections were conducted on 9<sup>th</sup>, 14<sup>th</sup>, 24<sup>th</sup> and 31<sup>st</sup> July 2004. Observations by ET, action by the Contractor and outcome are summarised in the following table.

**Table 7.1 Summary of Findings, Actions and Outcomes of Site Inspection by ET**

Observations	Actions by Contractor	Outcome
Drainage system was blocked by deposit. (14.07.2004)	Cleaned up the deposit regularly.	Deposit in the drainage was cleaned up. (31.07.2004)
Debris was observed in the sediment tanks. (31.07.2004)	To clean up the debris in the sedimentation system regularly.	To be observed in next reporting period.
The engine cover of excavator was opened during operation (31.07.2004)	To ensure all cover of excavators are closed.	To be observed in next reporting period.
Haul roads were dusty. (14.07.2004)	Sprayed more water on dusty area.	Situation improved. (24.07.2004)

The Independent Environmental Checker (IEC) conducted at audit on 14<sup>th</sup> July 2004. The major observations were summarized in the following table.

**Table 7.2 Summary of Findings, Actions and Outcomes of Site Inspection by IEC**

Observations	Actions by Contractor	Outcome
Splashing generated from wet soils during transfer to the barge at the tipping hall has caused splashing into the sea.	Raised nets to retain material and instructed barges to berth as close to the seawall as possible.	To be observed in next reporting period.
Pondings were observed at various locations.	Drain away the stagnant water.	Some pondings were filled. (31.07.2004)
The wheel washing bay near the main entrance was flooded.	Maintained the drainage system to avoid flooding.	Situation rectified. (24.07.2004)
Water sprinkling was weak. Dust emission from traffic on haul roads along the western side and seafront, and haul roads to the tipping hall and sorting facility on RTT side.	Sprayed more water on dusty area	Situation improved. (24.07.2004)
The western side of the fill bank was only partially hydroseeded.	To arrange hydroseeding on that portion upon slope trimming works completed.	To be observed in next reporting period.
Vegetation, as well as stagnant water, was observed in the u-channel and sand/silt traps.	Removed the debris and vegetation to drain away stagnant water regularly.	Deposit in the drainage was cleaned up. (31.07.2004)
Trucks were travelling at speed greater than 10 km/hr which enhanced dust emission.	Reminded all truck drivers to adhere to speed limit.	No speeding vehicles was noted. (24.07.2004)

#### 7.4 Landscape and Visual.

A landscape audit was conducted on 31<sup>st</sup> July 2004. There was no specific site observation regarding the landscape aspect during the reporting period.

#### 8. WASTE MANAGEMENT.

189,000m<sup>3</sup> public fill was collected to the Fill Bank. 39.9t C&D waste and general refuse were disposed of at WENT Landfill. 0.472t chemical waste was collected by licensed collector on 21.07.2004.

#### 9. COMPLAINTS, NOTIFICATIONS OF SUMMONSES AND SUCCESSFUL PROSECUTIONS.

One complaint was received on 29.06.2004 about dust generation in the Fill Bank. The situation was rectified by the Contractor.

No complaint was received this month. Complaint Log is attached in Appendix VII. Cumulative statistics on complaints, notifications of summonses and successful prosecutions are attached in Appendix VIII.

#### 10. FUTURE KEY ISSUES.

The following are the scheduled construction activities for the next reported period. Scheduled monitoring activities for the following month are given in Appendix IX.

**Table 10.1 Works Programme for August 2004**

Works Activities	Predicted Impacts	Proposed Mitigation Measures
Public filling operation.	- Dust - Water	- Dampening of fill materials and exposed area. - Avoid stockpiling fill materials near seafront. - Avoid spillage of fill materials into the marine water.
Operation of tipping hall for unloading public fill into barges.	- Dust - Water	- The tipping halls shall be top and 3-sides enclosed. - Avoid spillage of fill materials into the marine water.
Construction of drainage system.	- Dust - Noise - Water	- Apply water spray during excavation and earth moving. - Comply with the conditions of construction noise permit. - Treat all wastewater to acceptable prior to discharge.
Construction of new tipping hall.	- Dust - Noise - Water	- Apply water spray during excavation and earth moving. - All wastewater should be collected and treated to acceptable prior to discharge.

## **11. CONCLUSION.**

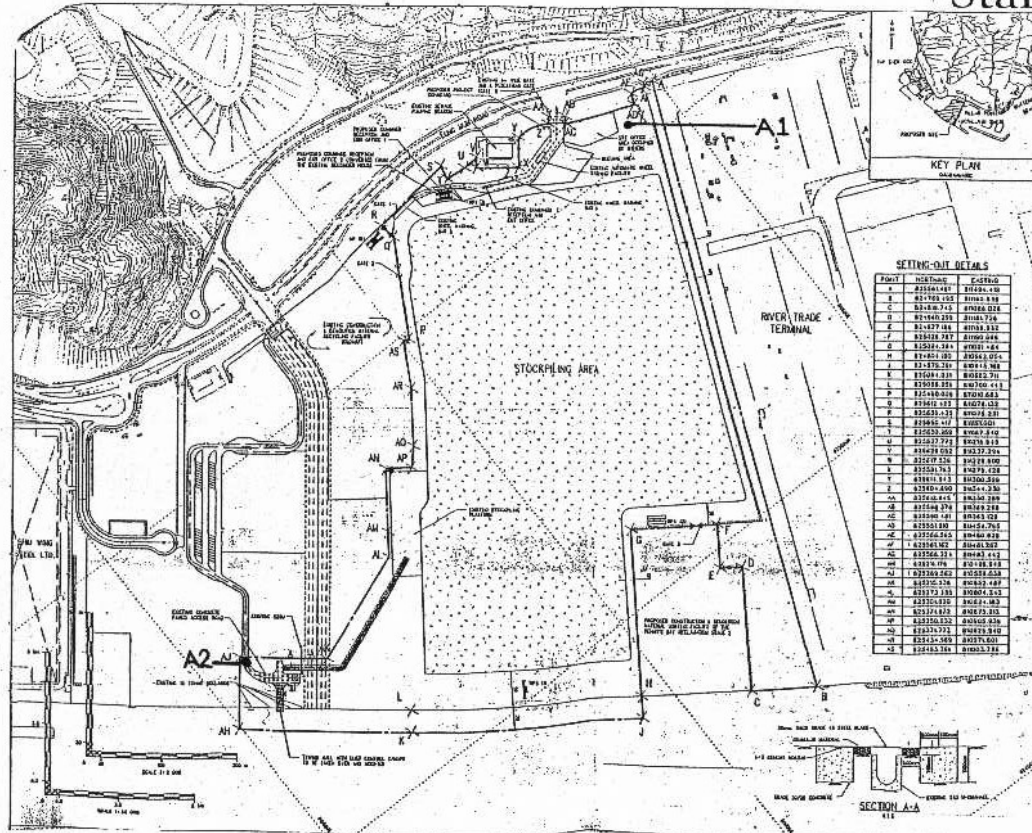
All results for the air quality monitoring conducted this month were acceptable with no exceedance to set action or limit levels for either 24 or 1-hour TSP.

In relation to the monitoring of water quality, there was no record of exceedance to the set Action and Limit Level during this reporting period.

No specific observation was reported from landscape audit.

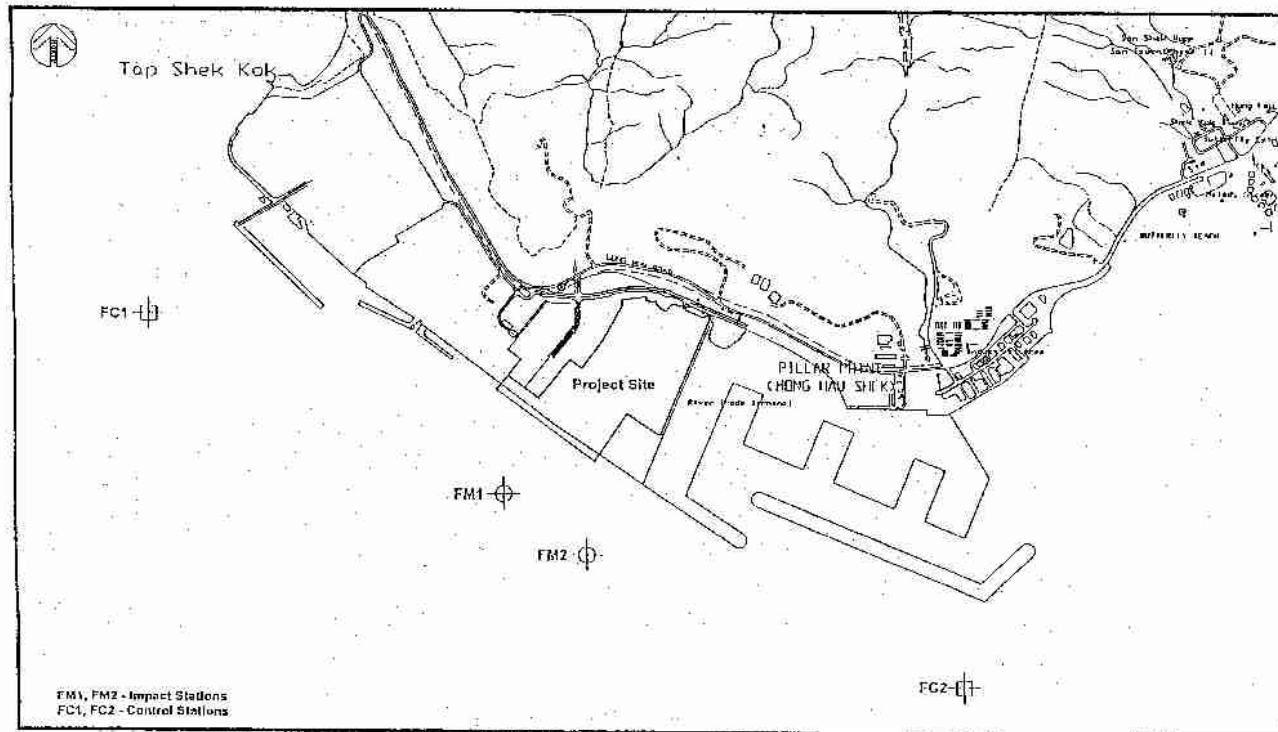
## Figures





**Figure 4.1 – Air Quality Monitoring Stations**

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**Figure 4.2 – Water Quality Monitoring Stations**

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Figure 6.1 - Graphical Plot for 24-hr TSP

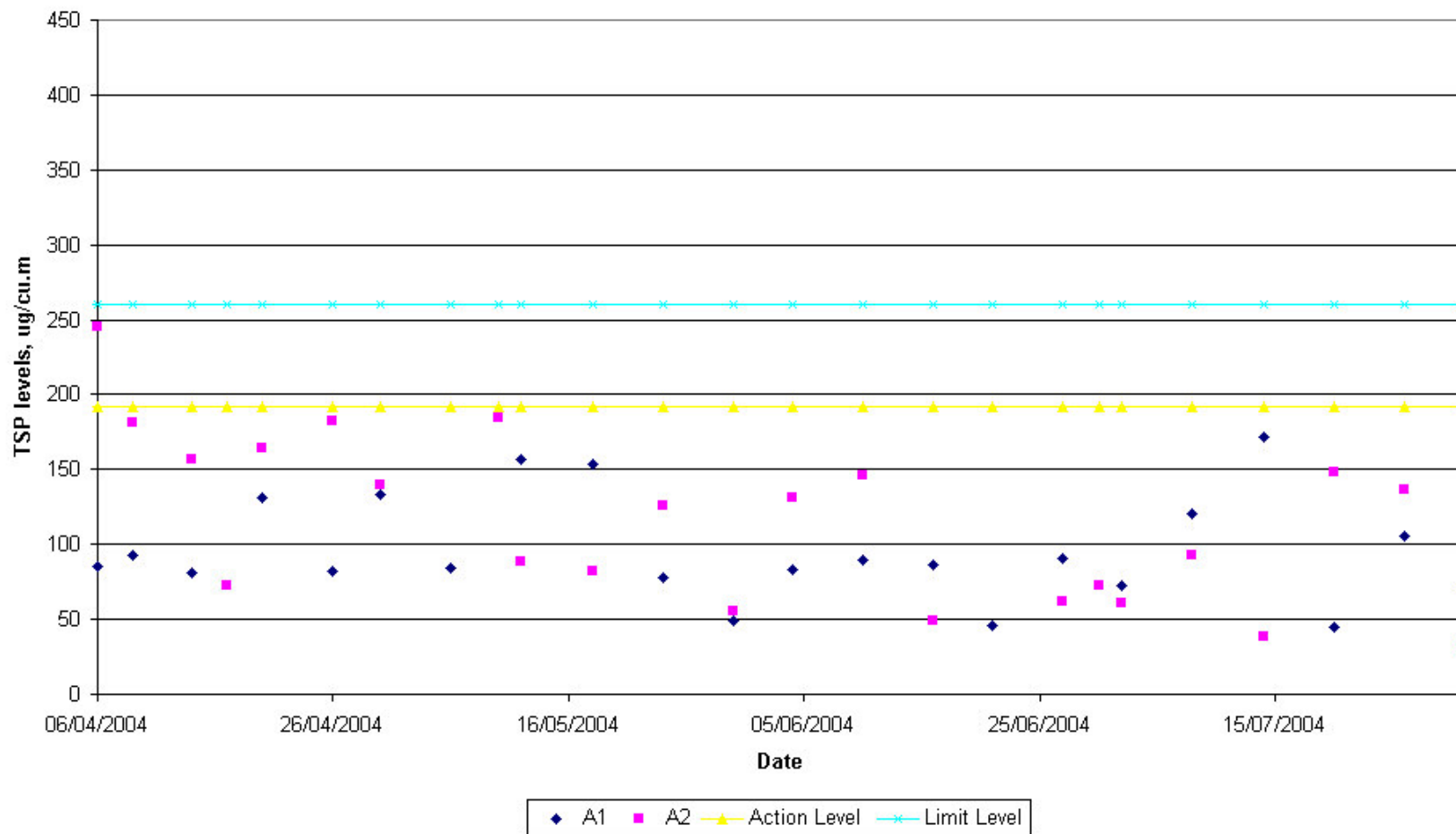




Figure 6.2 - Graphical Plot for 1-hr TSP

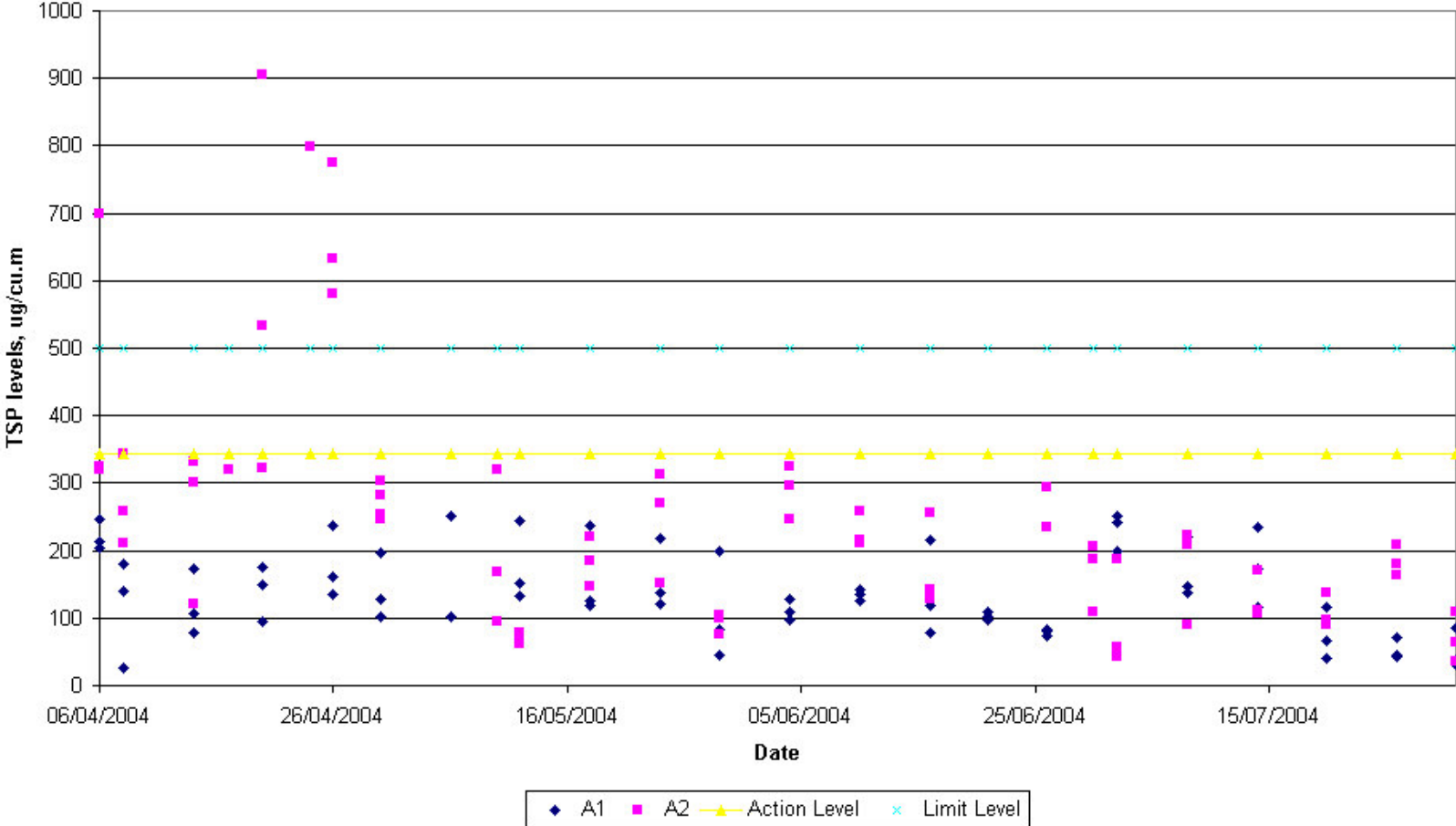


Figure 6.3 - Surface and Middle Averaged Dissolved Oxygen - Mid-Flood

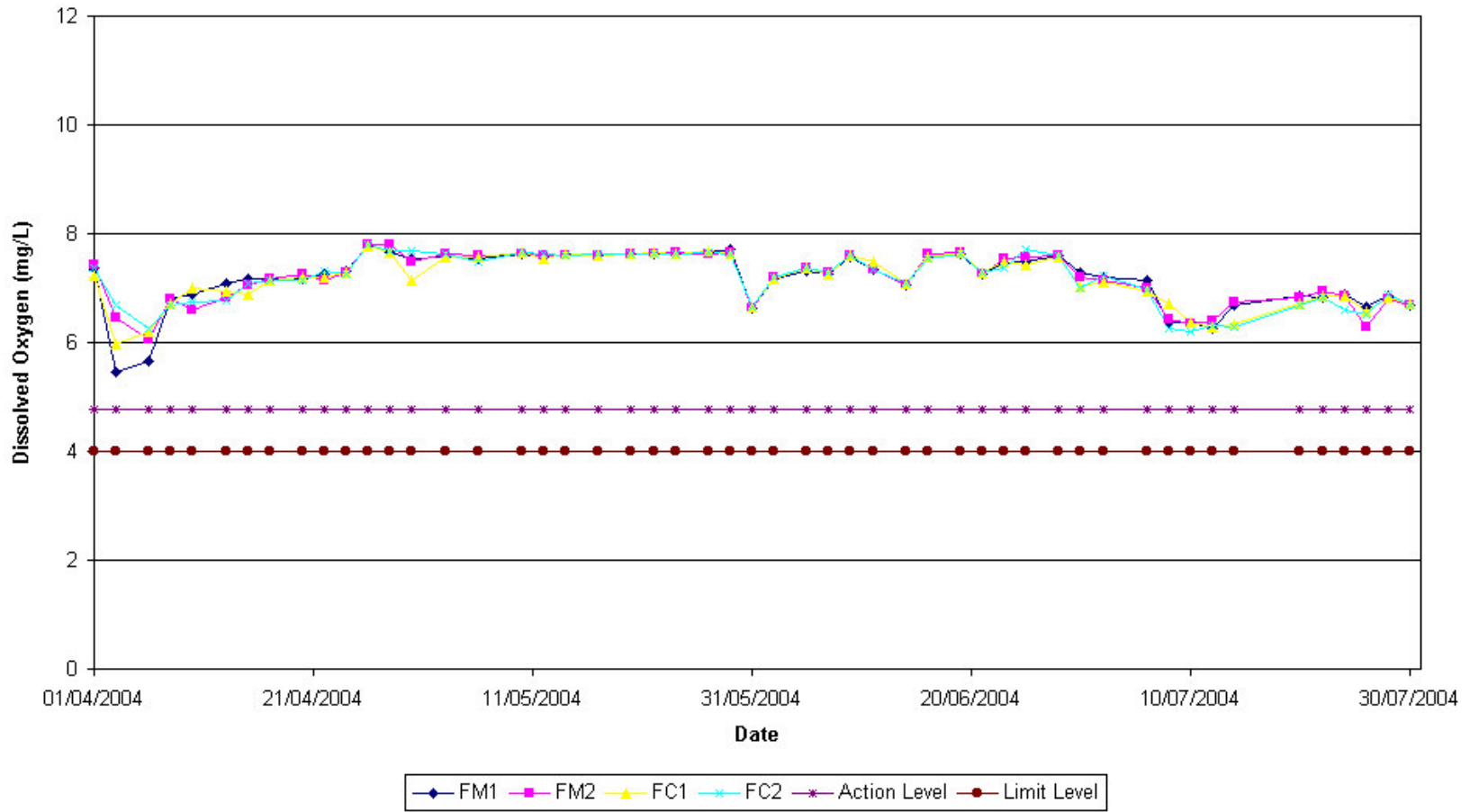


Figure 6.4 - Surface and Middle Averaged Dissolved Oxygen - Mid-Ebb

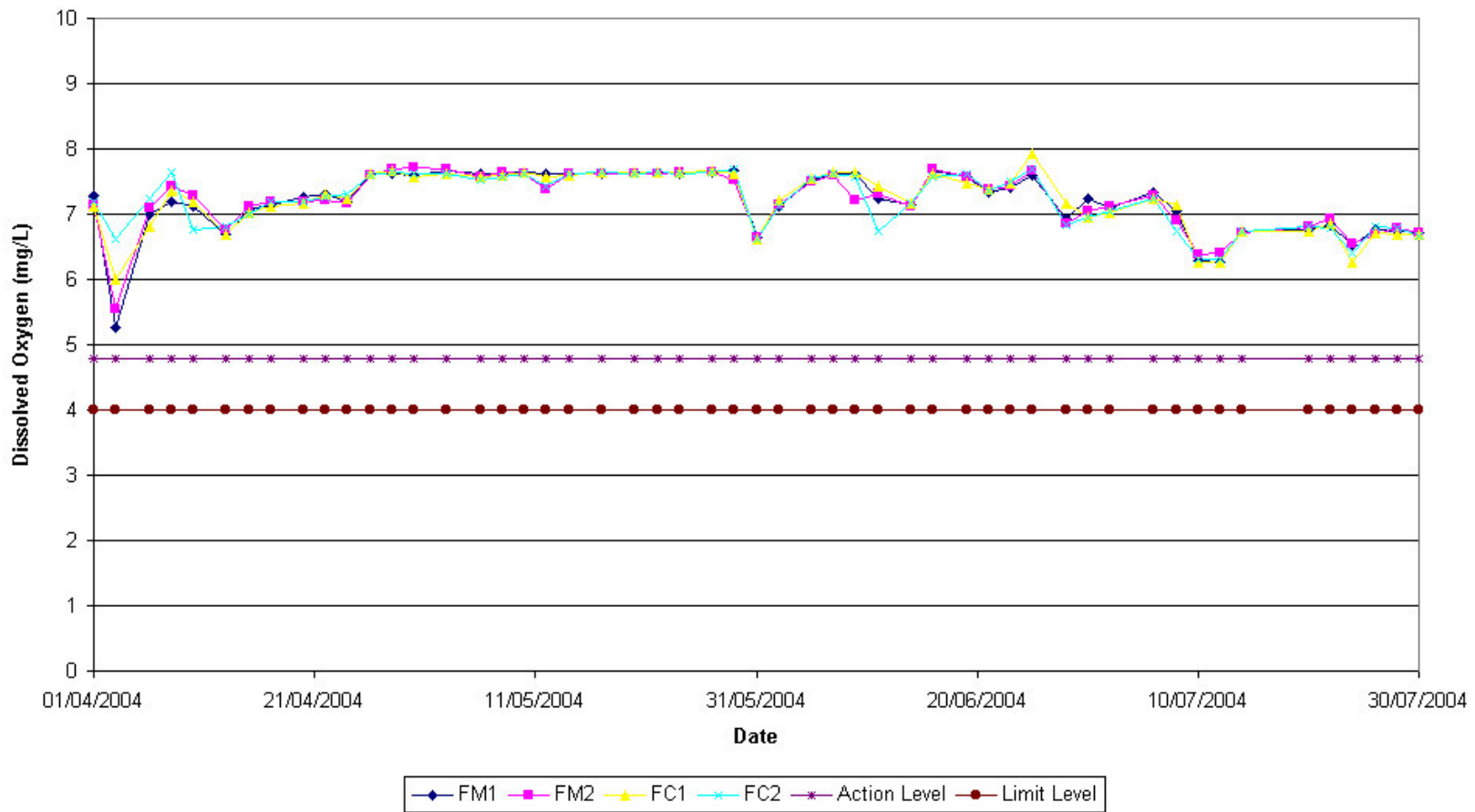


Figure 6.5 - Bottom Averaged Dissolved Oxygen - Mid-Flood

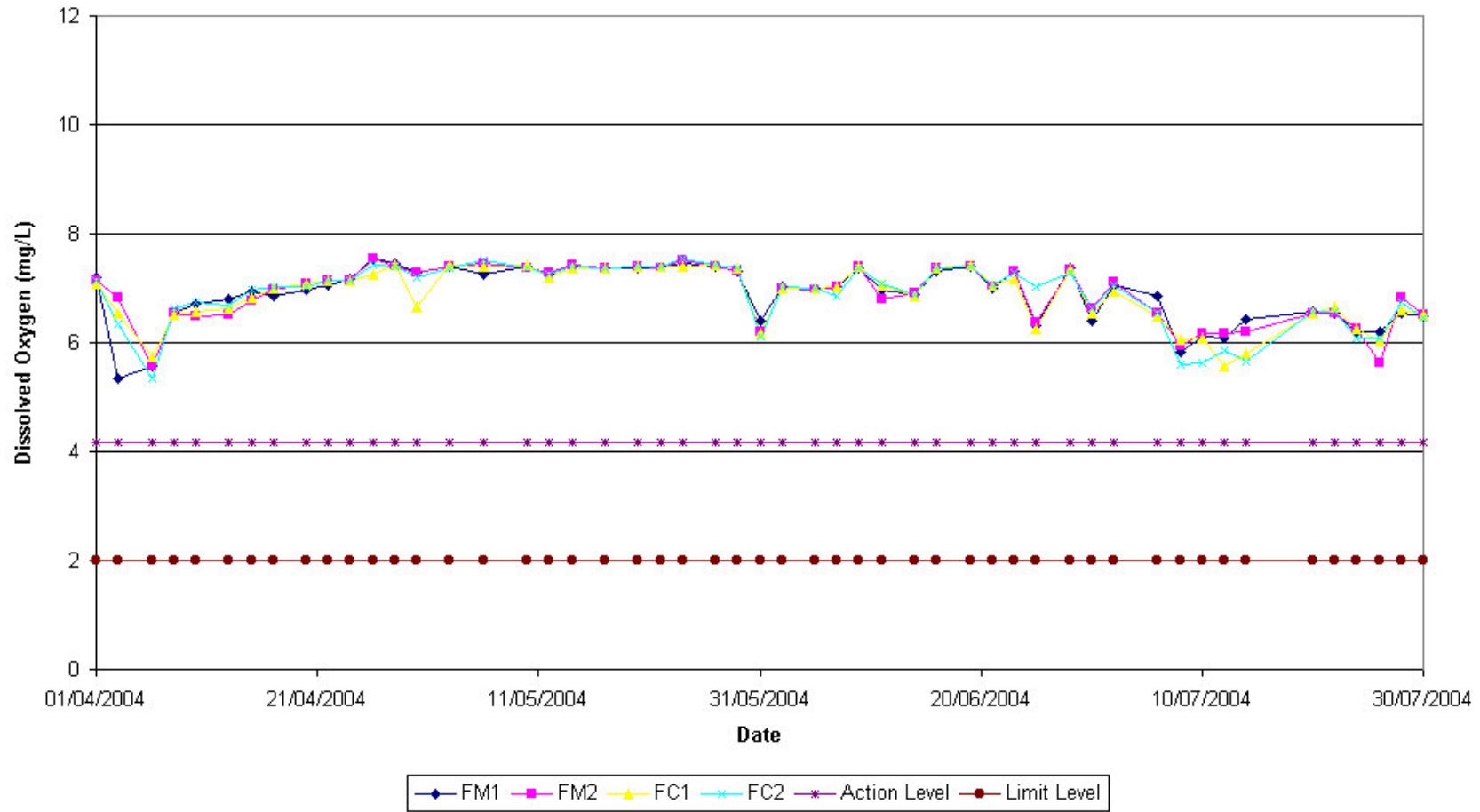


Figure 6.6 - Bottom Averaged Dissolved Oxygen - Mid-Ebb

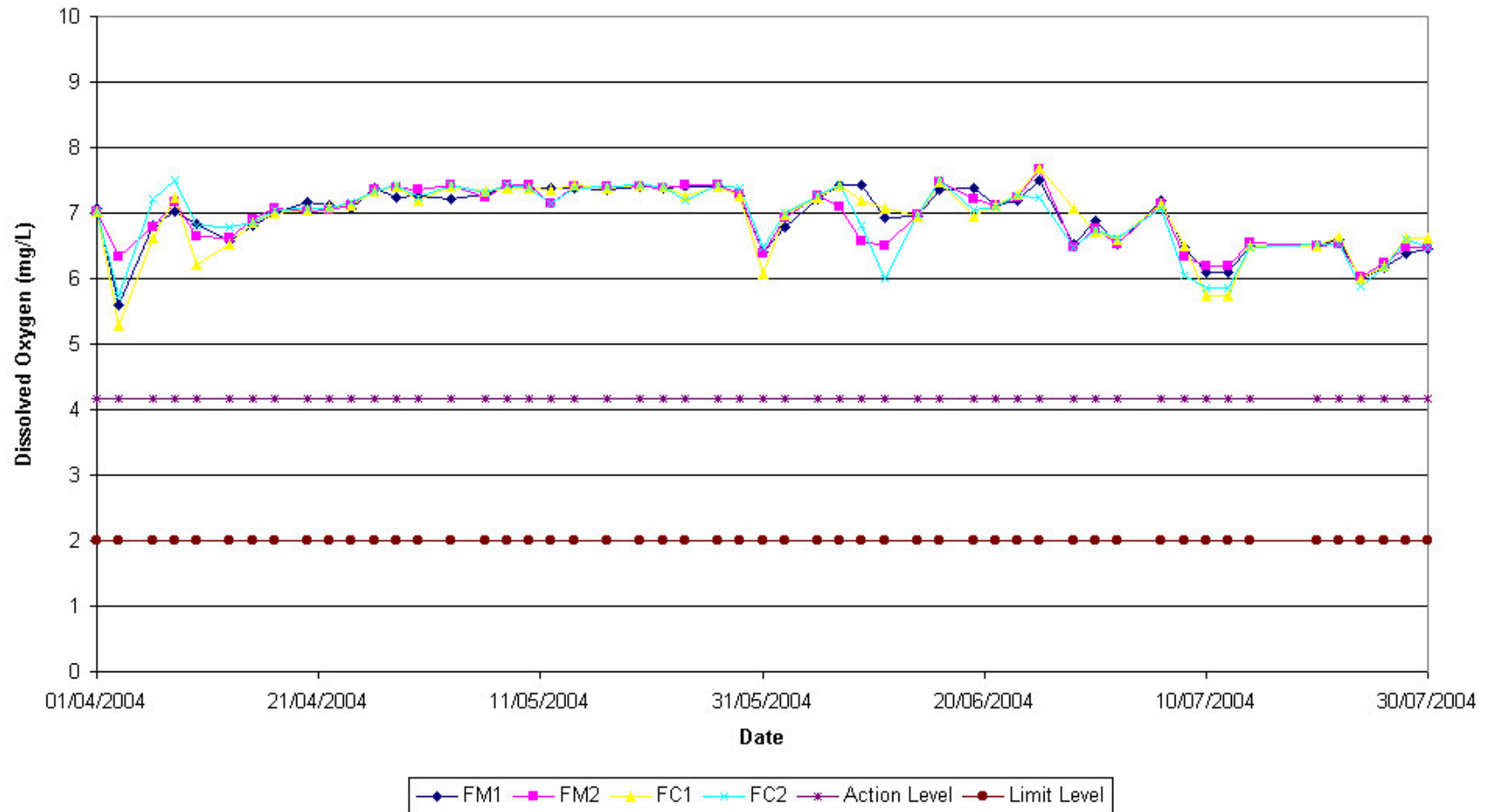


Figure 6.7 - Depth Averaged Turbidity - Mid-Flood

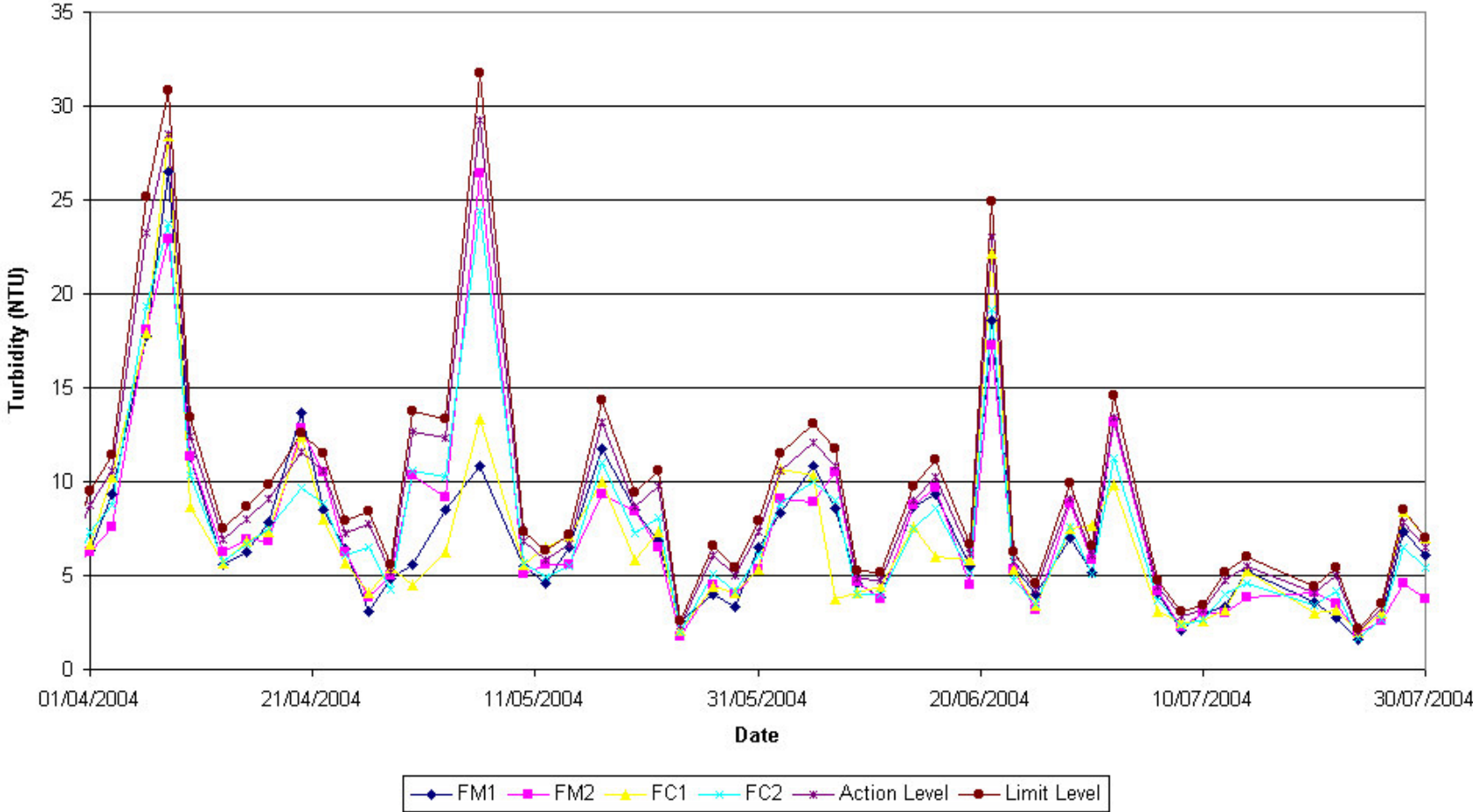


Figure 6.8 - Depth Averaged Turbidity - Mid-Ebb

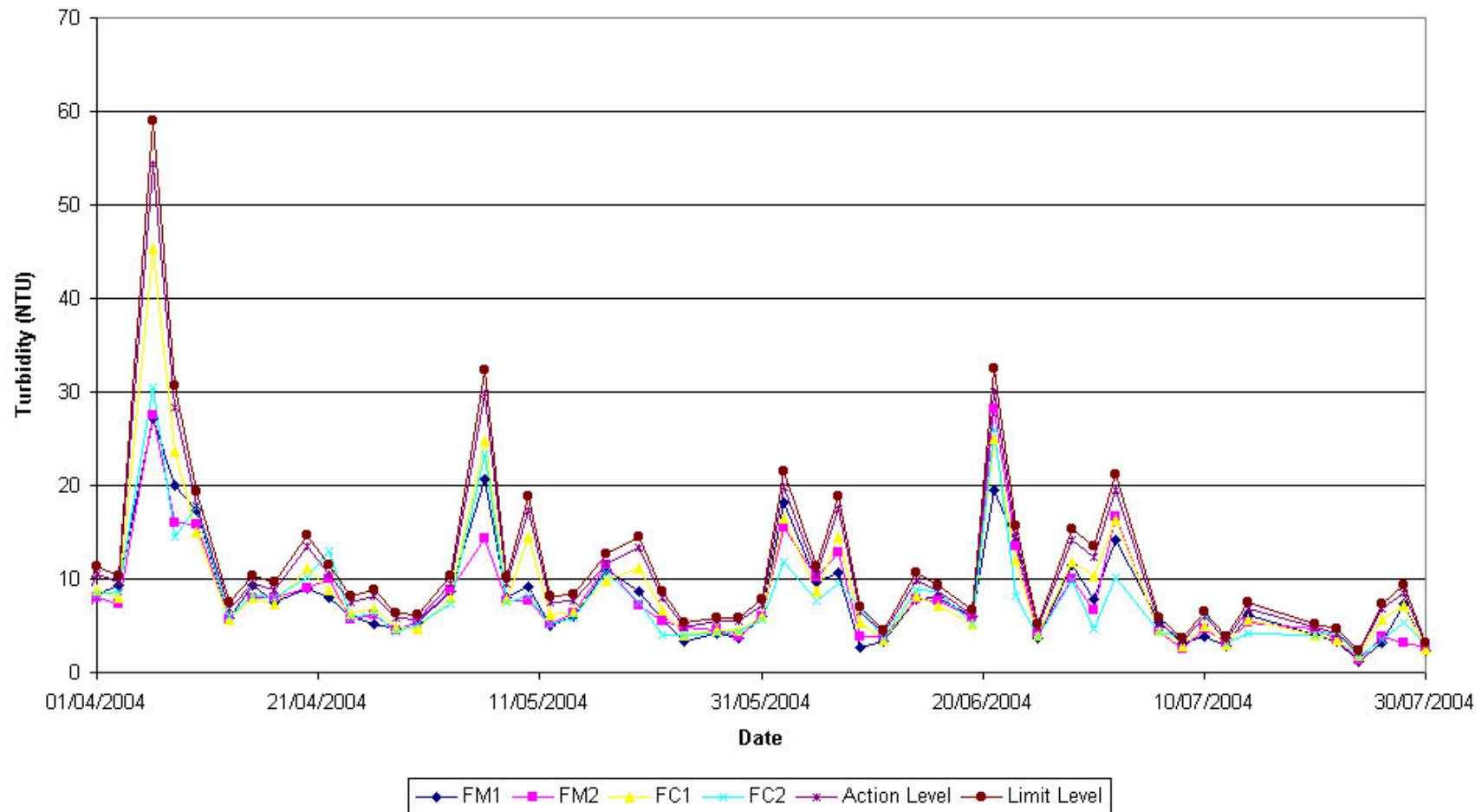


Figure 6.9 - Depth Averaged Suspended Solids - Mid-Flood

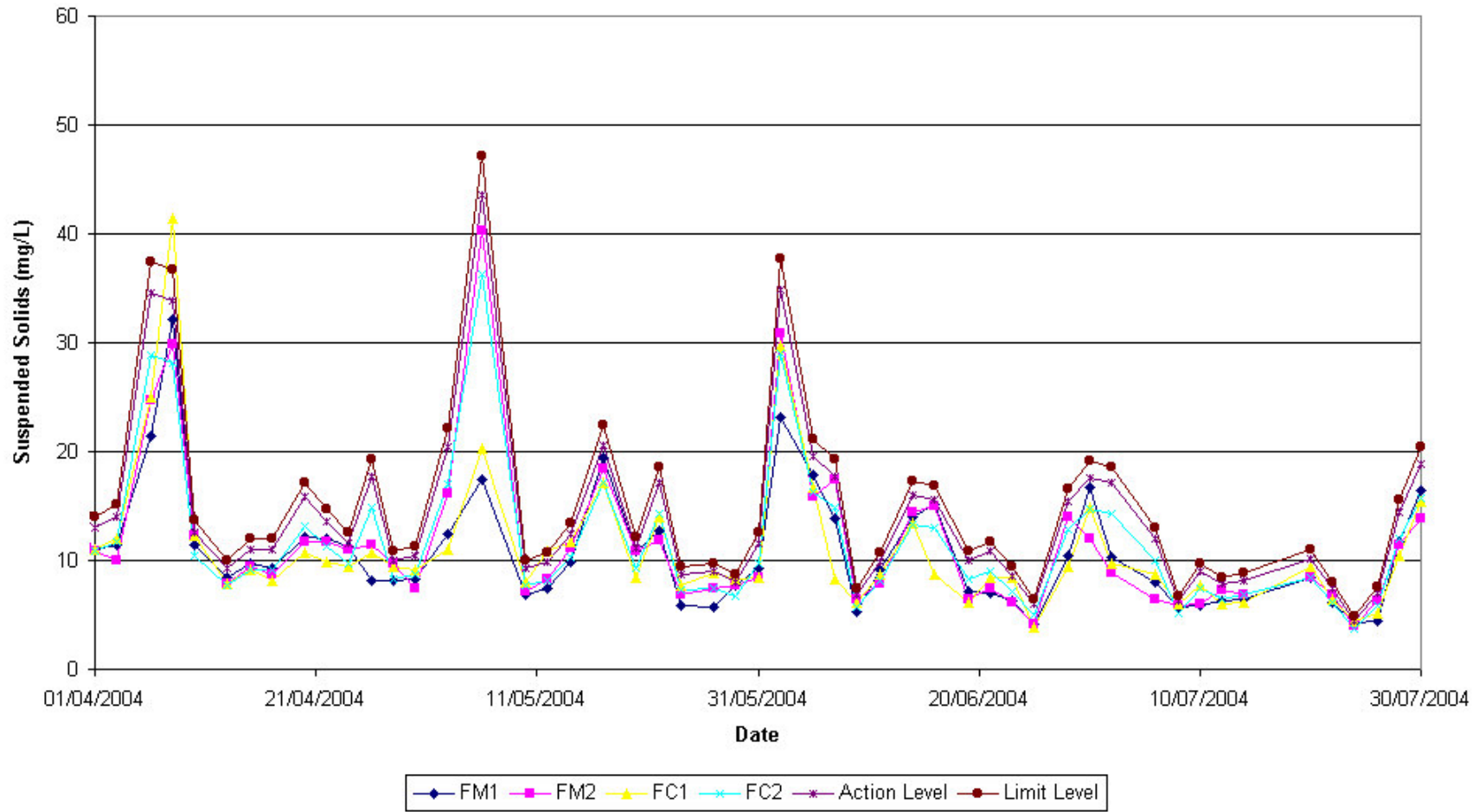
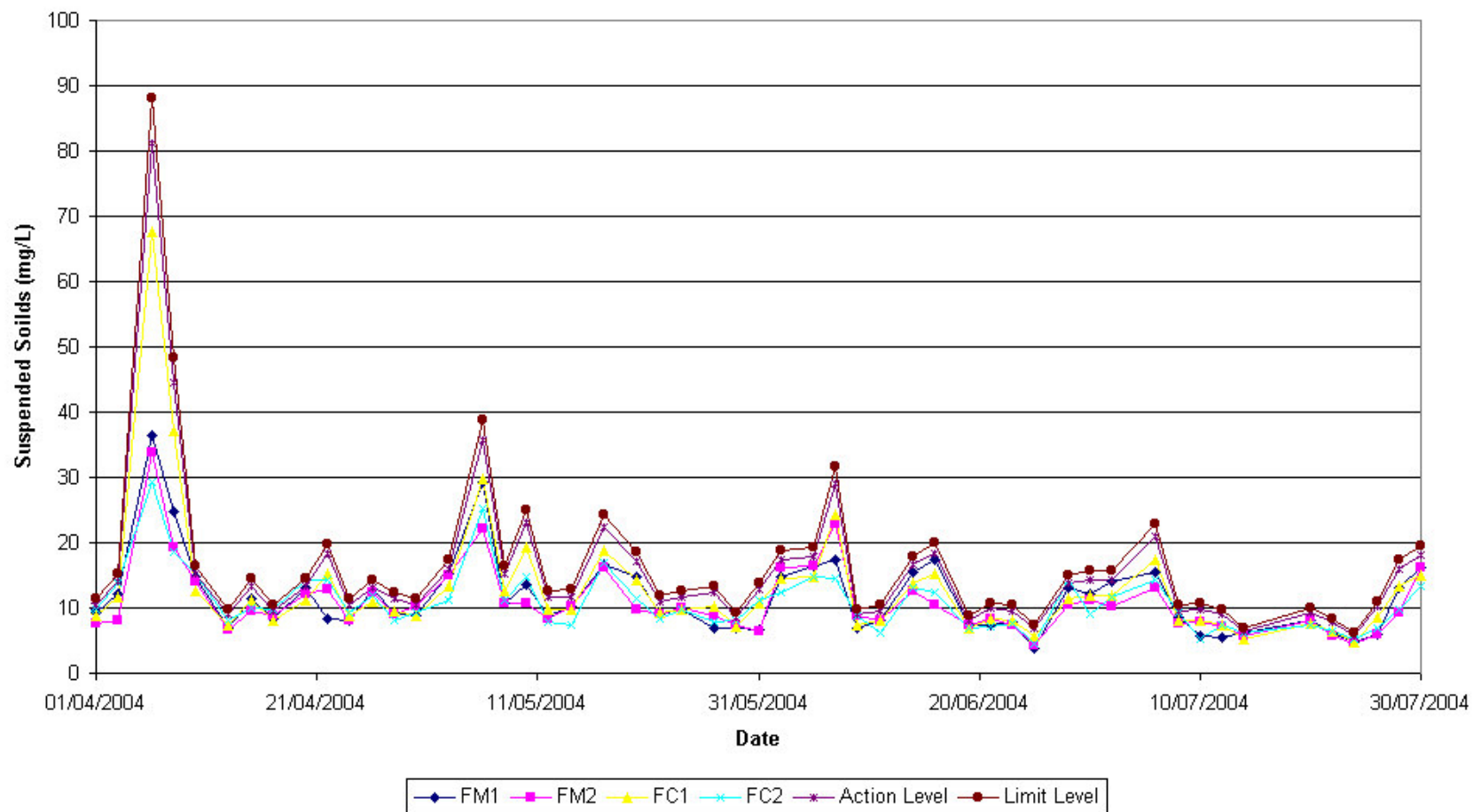


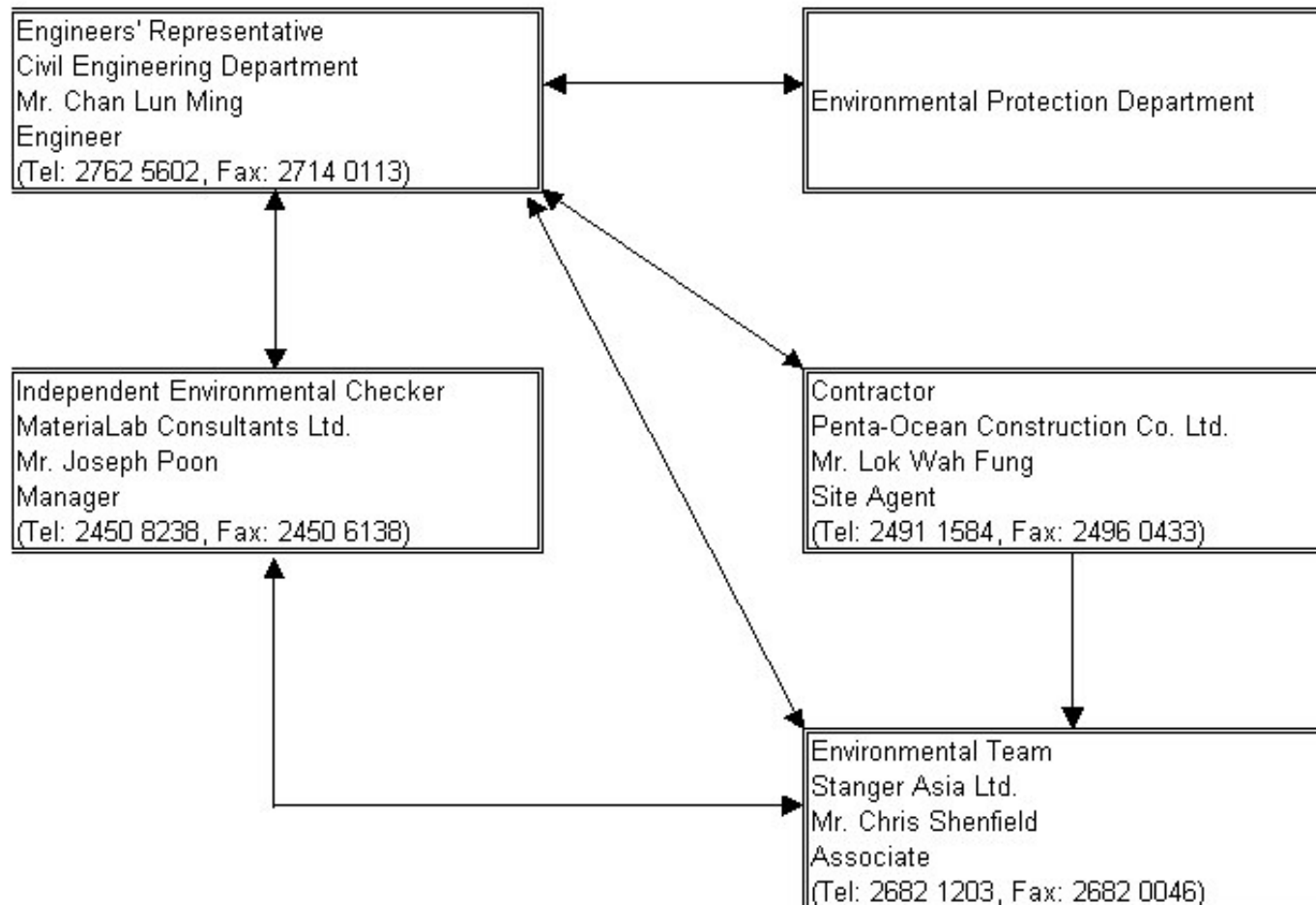


Figure 6.10 - Depth Averaged Suspended Solids - Mid-Ebb



**Appendix I**  
**Organization Chart**

**Project Organization (Environmental)**  
**Fill Bank at Tuen Mun Area 38**  
**Contract No. CV/2002/13**



## **Appendix II**

### **Calibration Certificates of the Monitoring Equipment**



**SOMP ENV052 : CALIBRATION RECORD OF HIGH VOLUME AIR SAMPLER (TSP)**

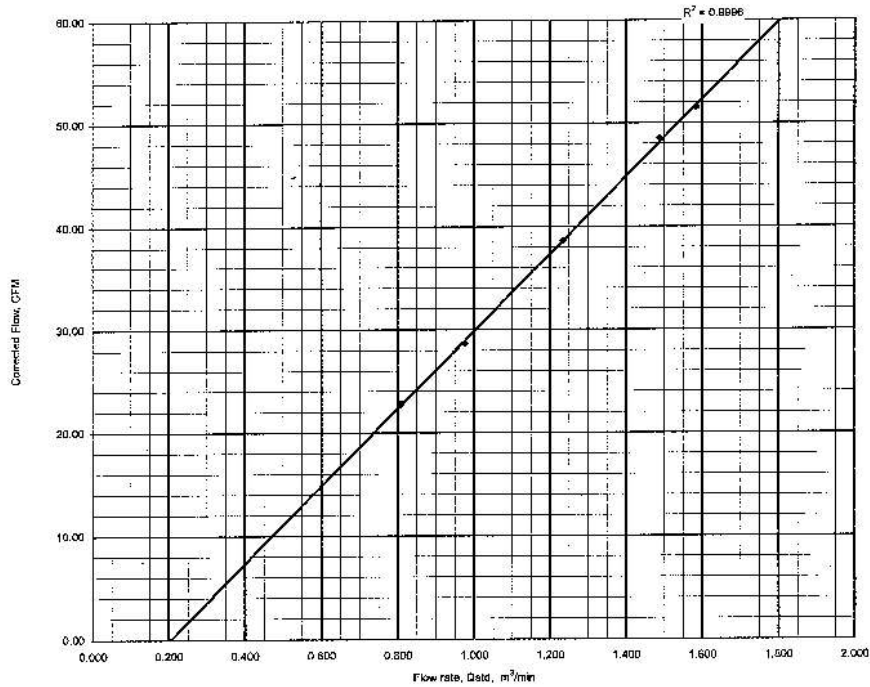
Date: 16/06/2004  
 Temp.: 28 °C  
 At. Press: 755 mm Hg  
 Calibrated by: C. F. Chong  
 Next Calibration Due Date: 16/08/2004

Equipment No.: EM3052  
 Serial No.:  
 Calibration No.:

Plate	Flow Rate (m <sup>3</sup> /min)	True In. H2O	Corrected Flow (CFM)
18	1.585	10.1	51.48
13	1.488	8.9	48.51
10	1.234	6.1	38.51
7	0.976	3.6	28.71
5	0.809	2.6	22.77

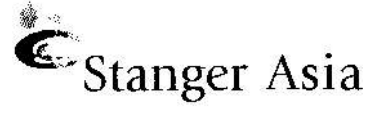
Remarks: The correlation coefficient is larger than 0.99 indicates the calibration is linear.  
 Slope= 37.511859  
 Intercept= -7.682409

Location : Tuen Mun Area 38 - A1



Tester: C. F. Chong

Checked By: Arthur Cheng



**SOMP ENV052 : CALIBRATION RECORD OF HIGH VOLUME AIR SAMPLER (TSP)**

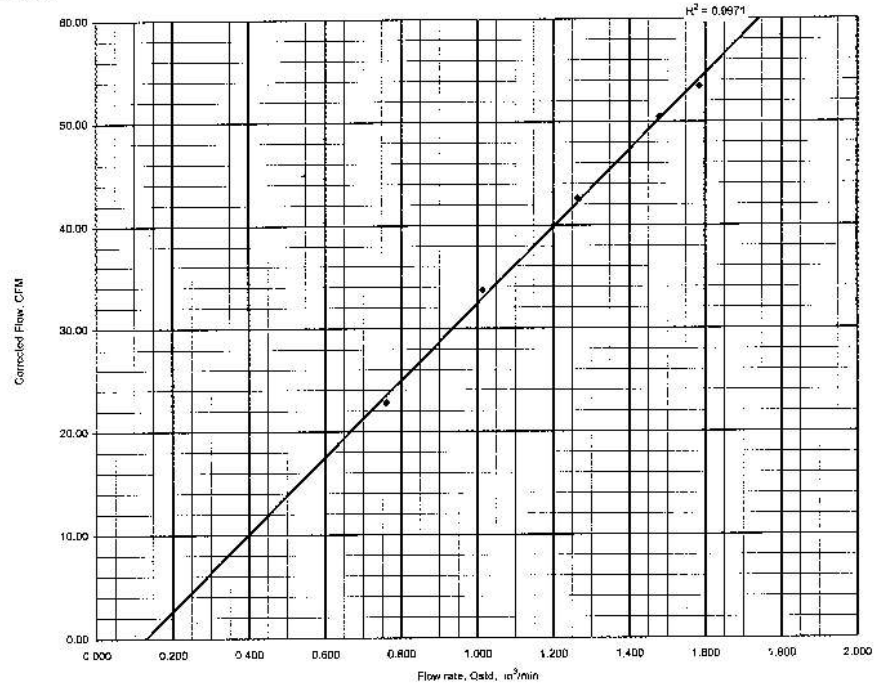
Date: 16/06/2004  
 Temp.: 28 °C  
 AL Press: 755 mm Hg  
 Calibrated by: C. F. Chong  
 Next Calibration Due Date: 16/06/2004

Equipment No.: EM3063  
 Serial No.: 11000/9305  
 Calibration No.:

Plate	Flow Rate (m³/min)	True in.H2O	Corrected Flow (CFM)
18	1.585	16.1	53.46
13	1.480	8.8	50.49
10	1.264	6.4	42.57
7	1.013	4.1	33.66
5	0.761	2.3	22.77

Remarks: The correlation coefficient is larger than 0.99 indicates the calibration is linear.  
 Slope= 37.222559  
 Intercept= -4.839942

Location: Tuen Mun Area 36 - A2



Tester: C. F. Chong

Checked By: Arthur Cheng



**SOMP ENV062: CALIBRATION RECORD OF TURBIDIMETER**

Date of Calibration: 24/06/2004

Due Date of Next Calibration: 24/09/2004

Equipment No.: EM 2365

Manufacturer: HACH

Model: 2100P

Serial No.: 970500014289

Turbidimeter Calibration standard (HACH): No.1: 20 NTU  
No.2: 100 NTU  
No.3: 800 NTU

Stock Calibration standard No.: 804

Three-point calibration accepted: Y / N

Stock Calibration checking standards No. QCS 868

Turbidity value - Checking standards (NTU)		
Actual value	Measured value	Accepted*: Y/N
0	0	Y
5	5.3	Y
10	10.4	Y
50	54	Y
100	103	Y
400	410	Y

\*Allowing Deviation: +/- 10%

Tested by: *Ami* Checked by: *ARLR*

**SOMP ENV066 : CALIBRATION RECORD OF YSI MODEL 30  
HANDHELD SALINITY, CONDUCTIVITY &  
TEMPERATURE SYSTEM**

Calibration No. 04/2202  
 Equipment No. EM 3694  
 Serial No. 00F0285AA  
 Date of Calibration: 17/06/2004  
 Due Date of Next Calibration: 17/09/2004  
 Stock Calibration Standard Potassium Chloride No. 316  
 Stock Calibration Check Potassium Chloride No. 648

CERTIFIED TRUE COPY

*[Signature]*  
 NAME: S.C.F. LAU/Y.Y. PANG  
 For Stanger Asia Limited

Volumetric glassware employed: V14, V103, V104, V68, V69, V35

Calibration Check of the Salinity, Conductivity and Temperature System	
Calibration Check Solutions, ppt	Meter reading, ppt
0.0	0.0
10.0	10.5
20.0	20.4
30.0	31.0
40.0	43.0
Allowing deviation : $\pm 10\%$	

Tested by : *[Signature]*

Checked By : *[Signature]*

APPROVED FOR USE BY

*[Signature]*  
 POSITION

*[Signature]*



**SOMP ENV064 : CALIBRATION RECORD OF DISSOLVED OXYGEN METER**

Dissolved Oxygen Meter Equipment No.: EM 961Dissolved Oxygen Serial No.: 93M12874Dissolved Oxygen Probe Serial No.: 96K0145Date of Calibration.: 24-06-2004Due Date of Next Calibration.: 24-09-2004Molarity of sodium thiosulphate solution: 0.0251MPotassium Bi-iodate No.: 480

Standardisation of Sodium Thiosulphate Solution			
Standard Solution	Initial burette reading B, mL	Final burette reading C, mL	Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> used A, mL = (C - B)
Standard 1	0.00	20.10	20.10
Standard 2	0.00	20.05	20.05
Standard 3	0.00	20.10	20.10
Average Value			20.08

Calibration of the Dissolved Oxygen Meter					
Standard Solutions	Initial burette reading B, mL	Final burette reading C, mL	Vol. of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> used A, mL = (C - B)	D.O. by titration, mg/L	Meter reading, mg/L
A	0.00	1.95	1.95	1.94	2.01
B	0.00	5.35	5.35	5.35	5.45
C	0.00	6.75	6.75	6.72	6.90
D	0.00	7.80	7.80	7.77	7.69
Allowing deviation : ± 10%					

Tested by : TomChecked By : ALR

## **Appendix III**

### **Event and Actions Plans**

**Event and Action Plan for Air Quality**

EVENT	ACTION			
	ET Leader	IC (E)	ER	CONTRACTOR
Action Level				
Exceedance for one sample	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures.</li> <li>2. Inform ER, IEC and Contractor.</li> <li>3. Repeat measurement to confirm findings.</li> <li>4. Increase monitoring frequency to daily.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET.</li> <li>2. Check Contractor's working methods.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify Contractor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Rectify unacceptable practice.</li> <li>2. Amend working methods if appropriate.</li> </ol>
Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures.</li> <li>2. Inform IEC and Contractor.</li> <li>3. Repeat measurement to confirm findings.</li> <li>4. Increase monitoring frequency to daily.</li> <li>5. Discuss with IEC and Contractor on remedial actions.</li> <li>6. If exceedance continues, arrange meeting with IEC and ER.</li> <li>7. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET.</li> <li>2. Check Contractor's working method.</li> <li>3. Discuss with ET and Contractor on possible remedial measures.</li> <li>4. Advise the ER on the effectiveness of the proposed remedial measures.</li> <li>5. Supervise implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing.</li> <li>2. Notify Contractor.</li> <li>3. Ensure remedial actions are properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit proposals for remedial actions to ER within 3 working days of notification.</li> <li>2. Implement the agreed proposals.</li> <li>3. Amend proposals if appropriate.</li> </ol>

**Event and Action Plan for Air Quality (cont'd)**

EVENT	ACTION			
	ET Leader	IC (E)	ER	CONTRCATOR
Limit Level				
Exceedance for one sample	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures.</li> <li>2. Inform ER, Contractor and EPD.</li> <li>3. Repeat measurement to confirm findings.</li> <li>4. Increase monitoring frequency to daily.</li> <li>5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET.</li> <li>2. Check Contractor's working method.</li> <li>4. Discuss with ET and Contractor on possible remedial measures.</li> <li>5. Advise the ER on the effectiveness of the proposed remedial measures.</li> <li>6. Supervisor implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing.</li> <li>2. Notify Contractor.</li> <li>3. Ensure remedial actions properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedances.</li> <li>2. Submit proposals for remedial actions to IEC within 3 working days of notification.</li> <li>3. Implement the agreed proposals.</li> <li>4. Amend proposal if appropriate.</li> </ol>
Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures.</li> <li>2. Inform IEC, ER and Contractor and EPD.</li> <li>3. Repeat measurements to confirm findings.</li> <li>4. Increase monitoring frequency to daily.</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation measure(s) to be implemented.</li> <li>6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken.</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst ER, ET and Contractor on the potential remedial actions.</li> <li>2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly.</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing.</li> <li>2. Notify Contractor.</li> <li>3. In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented.</li> <li>4. Ensure remedial measures properly implemented.</li> <li>5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance.</li> <li>2. Submit proposals for remedial actions to IEC within 3 working days of notification.</li> <li>3. Implement the agreed proposals.</li> <li>4. Resubmit proposals if problem still not under control.</li> <li>5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.</li> </ol>

**Event and Action Plan for Water Quality**

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Action level				
Action level being exceeded by one sampling day.	<ol style="list-style-type: none"> <li>Repeat in-situ measurements to confirm findings;</li> <li>Identify source(s) of impacts;</li> <li>Inform IEC and Contractor;</li> <li>Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>Discuss mitigation measures with IEC and Contractor;</li> <li>Repeat measurements on next day of exceedance.</li> </ol>	<ol style="list-style-type: none"> <li>Discuss with ET and Contractor on the mitigation measures;</li> <li>Review proposals on mitigation measures submitted by Contractor and advise ER accordingly;</li> <li>Assess the effectiveness of implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>Discuss with IEC on the proposed mitigation measures;</li> <li>Make agreement on the mitigation measures to be implemented.</li> </ol>	<ol style="list-style-type: none"> <li>Inform the ER and confirm notification of the non-compliance in writing;</li> <li>Rectify unacceptable practice;</li> <li>Check all plant and equipment;</li> <li>Consider changes of working methods;</li> <li>Discuss with ET and IEC and propose mitigation measures to IEC and ER;</li> <li>Implement the agreed mitigation measures.</li> </ol>
Action level being exceeded by more than one consecutive sampling day.	<ol style="list-style-type: none"> <li>Repeat in-situ measurements to confirm findings;</li> <li>Identify source(s) of impact;</li> <li>Inform contractor and IEC;</li> <li>Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>Discuss mitigation measures with ER and Contractor;</li> <li>Ensure mitigation measures are implemented;</li> <li>Prepare to increase the monitoring frequency to daily;</li> <li>Repeat measurements on next day of exceedance.</li> </ol>	<ol style="list-style-type: none"> <li>Discuss with ET and Contractor on the proposed mitigation measures;</li> <li>Review proposals on mitigation measures submitted by Contractor advise ER accordingly;</li> <li>Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>Discuss with IEC on the proposed mitigation measures;</li> <li>Make agreement on the mitigation measures to be implemented;</li> <li>Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>Inform the Engineer and confirm notification of the non-compliance in writing;</li> <li>Rectify unacceptable practice;</li> <li>Check all plant and equipment;</li> <li>Consider changes of working methods;</li> <li>Discuss with the ET and IEC and propose mitigation measures to IEC and ER within 3 working days;</li> <li>Implement the agreed mitigation measures.</li> </ol>

**Event and Action Plan for Water Quality (Cont'd)**

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Limit level				
Limit level being exceeded by one sampling day.	<ol style="list-style-type: none"> <li>1. Repeat in-situ measurements to confirm findings;</li> <li>2. Identify source(s) of impact;</li> <li>3. Inform contractor and IEC;</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>5. Discuss mitigation measures with ER and Contractor;</li> <li>6. Ensure mitigation measures are implemented;</li> <li>7. Prepare to increase the monitoring frequency to daily until no exceedance of Limit level.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with ET and Contractor on the mitigation measures;</li> <li>2. Review proposals on mitigation measures submitted by the Contractor and advise the ER accordingly;</li> <li>3. Assess the effectiveness of implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with IEC, ET and Contractor on the proposed mitigation measures;</li> <li>2. Request Contractor to critically review the working methods;</li> <li>3. Make agreement on the mitigation measures to be implemented;</li> <li>3. Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform the Engineer and confirm notification of the non-compliance in writing;</li> <li>2. Rectify unacceptable practice;</li> <li>3. Check all plant and equipment;</li> <li>4. Consider changes of working methods;</li> <li>5. Discuss with the ET and IEC and propose mitigation measures to IEC and ER within 3 working days;</li> <li>6. Implement the agreed mitigation measures.</li> </ol>
Limit level being exceeded by more than one sampling day.	<ol style="list-style-type: none"> <li>1. Repeat in-situ measurements to confirm findings;</li> <li>2. Identify source(s) of impact;</li> <li>3. Inform contractor and IEC;</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>5. Discuss mitigation measures with ER and Contractor;</li> <li>6. Ensure mitigation measures are implemented;</li> <li>7. Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with ET and Contractor on the mitigation measures;</li> <li>2. Review proposals on mitigation measures submitted by the Contractor and advise ER accordingly;</li> <li>3. Assess the effectiveness of implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with IEC on the proposed mitigation measures;</li> <li>2. Request Contractor to critically review the working methods;</li> <li>3. Make agreement on the mitigation measures to be implemented;</li> <li>4. Assess the effectiveness of the implemented mitigation measures.</li> <li>5. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of works identified as the cause of exceedance until no exceedance of Limit level.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform the Engineer and confirm notification of the non-compliance in writing;</li> <li>2. Rectify unacceptable practice;</li> <li>3. Check all plant and equipment;</li> <li>4. Consider changes of working methods;</li> <li>5. Discuss with the ET and IEC and propose mitigation measures to IEC and ER within 3 working days;</li> <li>6. Implement the agreed mitigation measures;</li> <li>7. As directed by the Engineer, slow down or stop all or part of the works identified as the cause of exceedance or construction activities.</li> </ol>

## **Appendix IV**

### **Implementation Status of Mitigation Measures**

## IMPLEMENTATION STATUS OF MITIGATION MEASURES

Area	Mitigation Measures	Implementation Period	Implementation Status
1. General	Maximum stockpiling height to be limited to a maximum of +35mPD.	Throughout the operation period	Implemented
2. Air Quality	Working areas where excavation or earthmoving operations are taking place shall be sprayed with water or a dusty suppression chemical.	Throughout the operation period	Occasionally implemented
	Any stockpiling of excavated material shall be covered by impervious sheeting or sprayed with water or a dust suppression chemical.	Throughout the operation period	Occasionally implemented
	All roads within the site to be covered with concrete, bituminous materials, hardcore or metal plates.	Throughout the operation period	Implemented
	Erect a hoarding of at least 2.4m high along the northern and eastern boundaries of the site except at the site entrance/exit. Before occupation of the Recovery Park Phase I and II, site hoarding of at least 2.4m high should also be erected along the western boundary of the fill bank.	Throughout the operation period	Implemented
	Install/refurnish vehicle wheel washing facilities including high pressure water jets provided at designated vehicle exit points.	Throughout the operation period	Implemented
	At the barging point, the drop height between the barge and dump trucks shall be minimized.	Throughout the operation period	Implemented
	Tipping halls provided for transfer of public fill from trucks to barges shall be top and 3-sides enclosed.	Throughout the operation period	Implemented
	Water lorries and/or road sweepers shall be provided and used in dust suppression.	Throughout the operation period	Implemented
	The designated main haul roads shall be watered at approximately every 2 hours to ensure that the roads are kept sufficiently dampened.	Throughout the operation period	Implemented



<b>Area</b>	<b>Mitigation Measures</b>	<b>Implementation Period</b>	<b>Implementation Status</b>
2. Air Quality	Truck speed to be controlled to within 10 km/hr.	Throughout the operation period	Occasionally Implemented
	All dusty fill material shall be sprayed with water or a dust suppression chemical prior to loading, unloading or transfer.	Throughout the operation period	Occasionally Implemented
	Frequent watering (at least three times per day) of the worksites with active dusty operations is recommended. The frequency shall be increased when the weather is dry.	Throughout the operation period	Implemented
	Loading of public fill delivered to the site shall be sprayed with water at the material landing point to minimize dust emission except when the materials are sufficiently dampened when landing.	Throughout the operation period	Occasionally Implemented
	Vehicle washing facilities including high pressure water jet at the existing exits shall be maintained and operated by designated staff to ensure that these dust control measures are being used.	Throughout the operation period	Implemented
	Before leaving the fill bank site, every vehicle shall be washed to remove any dusty materials from its body and wheels.	Throughout the operation period	Implemented
	Trucks carrying dusty loads entered to the site shall be sprayed with water once the impervious sheeting covering the load is removed.	Throughout the operation period	Occasionally Implemented
	A minimum buffer distance of 20m shall always be maintained between the edge of public fill stockpiling area and the nearest air sensitive receivers at the River Trade Terminal.	Throughout the operation period	Implemented
	An area of 100m x 100m in the north-eastern corner of the stockpiling area shall be managed by the Contractor as a "truckload control zone". Number of trucks traveling to the control zone shall be limited to a maximum of 64 vehicles per hour, and a daily maximum of 633 vehicles per day.	Throughout the operation period	Implemented

Area	Mitigation Measures	Implementation Period	Implementation Status
2. Air Quality	A minimum buffer zone of 20m shall be maintained between the edge of the public fill stockpiling area and the nearest air sensitive land use at Recovery Park Phase I and Phase II along the western boundary of the site.	Throughout the operation period	Implemented
	Temporary slope surfaces shall be covered with tarpaulin sheets or other impermeable sheets, or sprayed with water or a dust suppression chemical, or protected by other methods approved by CED.	Throughout the operation period	Partially implemented
	Final slope surfaces shall be treated by compaction, followed by hydroseeding, vegetation planting or other suitable surface stabiliser approved by CED to prevent the washing away of stockpiled material.	Throughout the operation period	Implemented
	Any belt conveyor systems used for transfer of dusty materials shall be enclosed on top and 2 sides.	Throughout the operation period	N/A
	Every transfer point between two conveyors shall be totally enclosed.	Throughout the operation period	N/A
	An effective belt scraper or equivalent device shall be installed at the head pulley of every belt conveyor to dislodge fine particles that may adhere to the belt surface.	Throughout the operation period	N/A
	The belt conveyor shall be equipped with bottom plates or other similar means to prevent falling of material from the return belt.	Throughout the operation period	N/A
	Every stockpiling belt conveyor shall be provided with a mechanism to adjust its level such that the vertical distance between the belt conveyor and the material landing point is maintained at no more than 1m.	Throughout the operation period	N/A
	Dusty materials loaded from a belt conveyor outlet to stockpiles, storage bins, trucks, barges and other open areas shall be sprayed with water or a dust suppression chemical.	Throughout the operation period	N/A

<b>Area</b>	<b>Mitigation Measures</b>	<b>Implementation Period</b>	<b>Implementation Status</b>
2. Air Quality	Frequent mist spraying should be applied on dusty areas. The frequency of spraying required will depend upon local meteorological conditions such as rainfall, temperature, wind speed and humidity. The amount of mist spraying should be just enough to dampen the material without over-watering.	Throughout the operation period	Implemented
3. Noise	No project activities associated with land-based intake of public fill shall be carried out between 20:00 and 08:00 hrs daily.	Throughout the operation period	Implemented
	All construction works should be carried out during the non-restricted hours (i.e. 7:00 a.m. to 7:00 p.m. on weekdays other than General Holidays).	Throughout the operation period	N/A
	Before the commencement of any works that may generate a significant noise impact, the Contractor should submit to the Engineer for approval the method of working, equipment and sound-reducing measures (e.g. use of silenced type equipment).	Throughout the operation period	N/A
	The fill bank should not be in operation from 8:00 p.m. to 8:00 a.m. the next day.	Throughout the operation period	N/A
4. Water Quality	Trapezoidal surface channels should be constructed to intercept polluted surface runoff. These channels shall be equipped with sand/de-silting traps such that the effluent discharged from site during the establishment, operation and decommissioning phases will meet the required discharge limits.	Throughout the operation period	Implemented
	Tipping halls at the waterfront provided for transfer of public fill from trucks to barges shall be enclosed design with the top 3-sides enclosed to prevent spillage of material into the marine water.	Throughout the operation period	Implemented
	Before the completion of the surface drainage channels at the commencement of the project, earth bunds and sand bag barriers shall be use at required locations to effectively divert storm water to available drainage channels constructed under the reclamation works.	Throughout the operation period	Implemented

Area	Mitigation Measures	Implementation Period	Implementation Status
4. Water Quality	Temporary drainage facilities provided shall allow polluted stormwater to be diverted to existing intercepting channels before stockpiling of public fill should begin.	Throughout the operation period	Implemented
	Intercepting channels shall be equipped with sand/silt removal facilities to allow the stormwater to be treated before discharge at the designated outfalls.	Throughout the operation period	Implemented
	Effluent discharged shall meet the relevant discharge limits.	Throughout the operation period	N/A
	A minimum buffer distance of 50m will be provided between the edge of the stockpiling area of the fill bank and seafront.	Throughout the operation period	Implemented
	Open channels and/or other effective drainage system shall be constructed at the perimeter of the site for intercepting and directing runoff to sand/silt removal facilities prior to discharge.	Throughout the operation period	Implemented
	The unpaved area on the seaward side of the channels shall be covered with gravel and formed with slope so that polluted stormwater will be intercepted by the channels.	Throughout the operation period	Implemented
	Any excavated material generated near the seafront (e.g. from the construction of the barging point) not required to be backfilled immediately should be transported away from the seafront to avoid potential water quality impact especially during the rainy season.	Throughout the operation period	Implemented
	Public fill transported to the stockpiling area for storage should not contain unsuitable material such as peat, vegetation, timber, organic, soluble or perishable material, dangerous or toxic material, floatable materials (such as bottle, plastic bags, foam box), and materials susceptible to combustion.	Throughout the operation period	Implemented

Area	Mitigation Measures	Implementation Period	Implementation Status
4. Water Quality	Temporary slope surfaces shall be covered as far as practicable and as soon as possible with tarpaulin or other impermeable sheets, or protected by other methods approved by CED when rainstorms are likely, especially when a rainstorm is imminent or forecast.	Throughout the operation period	Partially implemented
	Final slope surfaces shall be treated by compaction, followed by hydroseeding, vegetation planting or other suitable stabilizer approved by CED to prevent the washing away of stockpiled material.	Throughout the operation period	Implemented
	Adequately designed and constructed catchpits, sand and silt removal facilities and intercepting channels should be maintained, and the deposited silt and grit should be removed weekly and on a as need basis especially during the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times.	Throughout the operation period	Implemented
	A wheel washing bay should be provided at the site exit and washwater should have sand and silt settled out or removed before the water is being reused or discharged into storm drains.	Throughout the operation period	Implemented
	All vehicles and plant bodies should be cleaned before they leave the fill bank site to ensure that no earth, mud or debris is deposited by them on roads.	Throughout the operation period	Implemented
	The section of construction road between the wheel washing bay and the public road should be paved with concrete, bituminous materials or hardcores to reduce vehicle tracking of soil and to prevent site run-off from entering public roads drains.	Throughout the operation period	Implemented

Area	Mitigation Measures	Implementation Period	Implementation Status
4. Water Quality	Sewage from toilets and similar facilities should be discharged into a foul sewer, or chemical toilets should be provided. Should chemical toilets be employed these must be provided by a licensed contractor, who will be responsible for appropriate disposal and maintenance of these facilities.	Throughout the operation period	Implemented
	Wastewater collected from canteen kitchens, including that from basins, sinks and floor drains, should be discharged into foul sewers via grease traps.	Throughout the operation period	N/A
	Drainage systems provided at car parking areas shall be provided with oil interceptors in addition to sand/silt removal facilities.	Throughout the operation period	Implemented
	All barges used in the transportation of fill material during the operation/decommissioning stages should be properly licensed under the Shipping and Port Control Ordinance, and of appropriate size such that adequate clearance is maintained between the vessels and the sea bed at all states of the tide.	Throughout the operation period	Implemented
	All vessels used for transportation of fill material should have tight fitting seals to their bottom openings.	Throughout the operation period	Implemented
	When backhoe fixed on an appropriately designed flat-top pontoon is in use, the reach of the backhoe shall be controlled to within the flat-top pontoon of sufficient length to avoid accidental dropping of public fill into the sea.	Throughout the operation period	N/A
	When hopper barges with mobile crane is in use, guardrails or equivalent shall be fixed alongside the berthing faces to guide the movement of the crane to avoid accidental dropping of fill material.	Throughout the operation period	N/A
	When derrick barges with built-in crane are in use, the reach of the jig shall be controlled to within the length of the barge to avoid accidental dropping of public fill into the sea.	Throughout the operation period	Implemented

<b>Area</b>	<b>Mitigation Measures</b>	<b>Implementation Period</b>	<b>Implementation Status</b>
4. Water Quality	The design of the specific transfer methods shall be as such that the pathway of material delivery from barge to the waterfront will not be directly on top of the marine water.	Throughout the operation period	Implemented
	Barges should not be filled to a level which may cause overflow of material during loading or transportation.	Throughout the operation period	Implemented
	Barge effluents (e.g. muddy water) should be properly collected and treated prior to disposal.	Throughout the operation period	Implemented
	Work activities should not cause any visible foam, oil, grease, scum, litter or other objectionable matters to be present on the water in the vicinity of the barging point.	Throughout the operation period	Implemented
	A waste collection vessel shall be deployed to remove floating refuse on the sea near the fill bank for proper disposal.	Throughout the operation period	Implemented
5. Landfill Gas	Main site offices of the fill bank shall be constructed within the site area lying outside the 250m consultation zone of the restored Siu Lang Shui Landfill.	Throughout the operation period	Implemented
	The container office(s) to be set up at the site entrance/exit which is situated within the construction zone of the landfill shall be constructed on a raised hollow platform, or equivalent.	Throughout the operation period	Implemented
	No underground structures such as drainage and sewage systems, underground pipelines and chambers shall be constructed at the site area lying within the consultation zone.	Throughout the operation period	Implemented
	In the unlikely event that any sign of leachate-contaminated groundwater be encountered during the establishment, operation or decommissioning phases of the fill bank, the landfill operator should be informed so that this can be collected for proper treatment and disposal.	Throughout the operation period	Implemented

Area	Mitigation Measures	Implementation Period	Implementation Status
6. Landscape and Visual	Hydroseeding or coloured geo-textile matting (dark green/brown) shall be provided on the slopes of the fill bank along the eastern, northern and western sides of the fill bank as the slopes of each layer of platform are formed.	Throughout the operation period	Implemented
	A buffer tree planting strip should be provided along the northern perimeter of the site where space permits. A row of approximately 3m high native evergreen tree species with a tall habit when fully grown (e.g. Casuarina equisetifolia) shall be planted at the early establishment/ operational phase of the project.	Throughout the operation period	Implemented
	The design, colour and finish of structures at the fill bank should be such that they are visually recessive. Reflectivity should be reduced through selection of material or surface treatment.	Throughout the operation period	Implemented
	The surface colour selected should be of an earthy tone with strong natural qualities (e.g. green/grey/brown). The use of bold colour schemes should be avoided.	Throughout the operation period	Implemented
	The existing 2.4m high site hoarding located along Lung Mun Road should be maintained to help screening of the fill bank.	Throughout the operation period	Implemented



**Appendix V**

**Air Quality Monitoring Results**

### Report on 24-hour Total Suspended Particulate Monitoring - A1

Sample Number	Location Code	Date and Time of Sampling	Start Counter Reading	Stop Counter Reading	Temperature, °C Initial/Final	Pressure, mmHg Initial/Final	Weather Conditions	Wind Direction	Weight of Filter, g Initial/Final	Flow rate Q <sub>std</sub> , std. m <sup>3</sup> /min	Total air volume of sample, std. m <sup>3</sup>	Mass Concentration of TSP, µg/std. m <sup>3</sup>
12638	A1	02/07/2004 16:55	1598.54	1623.16	31 29	749 750	Sunny	W	2.8117 2.9332	1.13	1669	73
12690	A1	08/07/2004 16:10	1626.16	1650.16	30 30	757 757	Sunny	SW	2.8788 3.0738	1.13	1627	120
12707	A1	14/07/2004 15:50	1759.68	1783.68	29 29	757 757	Sunny	SW	2.8530 3.1322	1.13	1627	172
12711	A1	20/07/2004 16:42	1787.39	1811.69	27 26	756 758	Sunny	SE	2.8623 2.9349	1.1	1604	45
12743	A1	26/07/2004 16:00	1814.69	1839.67	30 29	753 752	Sunny	E	2.8209 2.9991	1.12	1679	106
12760	A1	31/07/2004 14:30	1842.77	1868.08	30 29	757 755	Sunny	E	2.8039 2.9283	1.12	1701	73

### Report on 24-hour Total Suspended Particulate Monitoring - A2

Sample Number	Location Code	Date and Time of Sampling	Start Counter Reading	Stop Counter Reading	Temperature, °C Initial/Final	Pressure, mmHg Initial/Final	Weather Conditions	Wind Direction	Weight of Filter, g Initial/Final	Flow rate Q <sub>std</sub> , std. m <sup>3</sup> /min	Total air volume of sample, std. m <sup>3</sup>	Mass Concentration of TSP, µg/std. m <sup>3</sup>
12637	A2	02/07/2004 17:00	9905.46	9929.42	31 29	749 750	Sunny	W	2.8159 2.9161	1.15	1653	61
12691	A2	08/07/2004 16:20	9932.42	9956.42	30 30	757 757	Sunny	SW	2.8692 3.0240	1.15	1656	93
12708	A2	14/07/2004 16:20	9959.42	9983.42	29 29	757 757	Sunny	SW	2.8659 2.9286	1.15	1656	38
12720	A2	20/07/2004 16:50	9986.42	10010.42	27 26	756 758	Sunny	SE	2.8826 3.1176	1.1	1584	148
12742	A2	26/07/2004 15:18	10013.42	10036.95	30 29	753 752	Sunny	E	2.8242 3.0225	1.03	1454	136
12761	A2	31/07/2004 14:45	10039.95	10062.85	30 29	757 755	Sunny	E	2.8294 2.8772	1.15	1580	30

## Report on 1-hour Total Suspended Particulate Monitoring - A1

Sample Number	Location Code	Date and Time of Sampling	Start Counter Reading	Stop Counter Reading	Temperature, °C	Pressure, mmHg	Weather Conditions	Wind Direction	Weight of Filter, g Initial/Final	Flow rate Q <sub>std</sub> , std. m <sup>3</sup> /min	Total air volume of sample, std. m <sup>3</sup>	Mass Concentration of TSP, µg/std. m <sup>3</sup>
12673	A1	02/07/2004 11:30	1595.54	1596.54	31	749	Sunny	W	2.8305 2.8476	1.13	68	252
12646	A1	02/07/2004 14:00	1596.54	1597.54	31	749	Sunny	W	2.8369 2.8504	1.13	68	199
12642	A1	02/07/2004 15:05	1597.54	1598.54	31	749	Sunny	W	2.8335 2.8499	1.13	68	242
12681	A1	08/07/2004 10:15	1623.16	1624.16	30	757	Sunny	SW	2.8534 2.8684	1.13	68	221
12684	A1	08/07/2004 13:35	1624.16	1625.16	30	757	Sunny	SW	2.8518 2.8611	1.13	68	137
12687	A1	08/07/2004 14:35	1625.16	1626.16	30	757	Sunny	SW	2.8268 2.8368	1.13	68	147
12698	A1	14/07/2004 10:15	1756.68	1757.68	29	757	Sunny	SW	2.8324 2.8410	1.22	73	117
12703	A1	14/07/2004 13:10	1757.68	1758.68	29	757	Sunny	SW	2.8606 2.8777	1.22	73	234
12704	A1	14/07/2004 14:45	1758.68	1759.68	29	757	Sunny	SW	2.8400 2.8526	1.22	73	172
12722	A1	20/07/2004 13:30	1784.39	1785.39	27	756	Sunny	SE	2.8766 2.8814	1.22	73	66
12716	A1	20/07/2004 14:33	1785.39	1786.39	27	756	Sunny	SE	2.9043 2.9072	1.22	73	40
12714	A1	20/07/2004 15:40	1786.39	1787.39	27	756	Sunny	SE	2.8950 2.9034	1.22	73	115
12734	A1	26/07/2004 10:11	1811.69	1812.69	31	753	Sunny	E	2.8410 2.8439	1.1	66	44
12737	A1	26/07/2004 11:15	1812.69	1813.69	30	753	Sunny	E	2.8787 2.8815	1.1	66	42
12731	A1	26/07/2004 14:55	1813.69	1814.69	30	753	Sunny	E	2.8676 2.8722	1.1	66	70
12751	A1	31/07/2004 09:30	1839.67	1840.77	30	757	Sunny	E	2.8323 2.8351	1.12	74	38
12754	A1	31/07/2004 11:15	1840.77	1841.77	30	757	Sunny	E	2.8342 2.8363	1.12	67	31
12757	A1	31/07/2004 13:15	1841.77	1842.77	30	757	Sunny	E	2.8143 2.8201	1.12	67	86

### Report on 1-hour Total Suspended Particulate Monitoring - A2

Sample Number	Location Code	Date and Time of Sampling	Start Counter Reading	Stop Counter Reading	Temperature, °C	Pressure, mmHg	Weather Conditions	Wind Direction	Weight of Filter, g Initial/Final	Flow rate Q <sub>std</sub> , std. m <sup>3</sup> /min	Total air volume of sample, std. m <sup>3</sup>	Mass Concentration of TSP, µg/std. m <sup>3</sup>
12674	A2	02/07/2004 11:40	9902.46	9903.46	31	749	Sunny	W	2.8622 2.8751	1.15	69	187
12644	A2	02/07/2004 14:25	9903.46	9904.46	31	749	Sunny	W	2.8501 2.8531	1.15	69	43
12641	A2	02/07/2004 15:30	9904.46	9905.46	31	749	Sunny	W	2.8401 2.8441	1.15	69	58
12682	A2	08/07/2004 10:30	9929.42	9930.42	30	757	Sunny	SW	2.8379 2.8441	1.15	69	90
12685	A2	08/07/2004 13:50	9930.42	9931.42	30	757	Sunny	SW	2.8127 2.8281	1.15	69	223
12688	A2	08/07/2004 14:50	9931.42	9932.42	30	757	Sunny	SW	2.8621 2.8765	1.15	69	209
12699	A2	14/07/2004 10:30	9956.42	9957.42	29	757	Sunny	SW	2.8587 2.8664	1.15	69	112
12701	A2	14/07/2004 12:50	9957.42	9958.42	29	757	Sunny	SW	2.8750 2.8823	1.15	69	106
12706	A2	14/07/2004 15:10	9958.42	9959.42	29	757	Sunny	SW	2.8600 2.8717	1.15	69	170
12721	A2	20/07/2004 13:15	9983.42	9984.42	27	756	Sunny	SE	2.8763 2.8830	1.15	69	97
12718	A2	20/07/2004 14:20	9984.42	9985.42	27	756	Sunny	SE	2.9077 2.9139	1.15	69	90
12719	A2	20/07/2004 15:30	9985.42	9986.42	27	756	Sunny	SE	2.8797 2.8892	1.15	69	138
12733	A2	26/07/2004 09:11	10010.42	10011.42	31	753	Sunny	E	2.8445 2.8547	1.03	62	164
12735	A2	26/07/2004 10:30	10011.42	10012.42	30	753	Sunny	E	2.8071 2.8182	1.03	62	179
12739	A2	26/07/2004 11:30	10012.42	10013.42	30	753	Sunny	E	2.8777 2.8906	1.03	62	209
12752	A2	31/07/2004 09:47	10036.95	10037.95	30	757	Sunny	E	2.8336 2.8403	1.03	62	108
12755	A2	31/07/2004 11:28	10037.95	10038.95	30	757	Sunny	E	2.8121 2.8160	1.0	60	65
12758	A2	31/07/2004 13:35	10038.95	10039.95	30	757	Sunny	E	2.7986 2.8010	1.15	69	35

**Appendix VI**

**Water Quality Monitoring Results**

Project: Contract No. CV/2002/13 Fill Bank At Tuen Mun Area 3B										Client: Penta-Ocean Construction Co., Ltd.			Job No.: 4494.1									
Date of Sampling :		02/07/2004		Weather Condition: Cloudy			Ambient Temperature, °C: 31			Tide State: Mid-Flood												
Station	Time	Sea Condition	Overall Depth, m	Sampling Depth, m	Temperature, °C		Dissolved Oxygen, mg/L			Dissolved Oxygen, %			Salinity, ppt		Turbidity, NTU			Suspended Solids, mg/L		Remarks		
					a	b	a	b	Average	a	b	Average	a	b	a	b	Average		Depth			
FM1 S	20:40	Small wave	18.0	1.0	31.0	31.0	7.31	7.27	7.21	99.7	99.5	98.3	29.1	29.1	5.12	5.03	13.33	5	6	10.3		
FM1 M				9.0	30.9	30.9	7.10	7.14		97.6	96.5		30.2	30.2	11.60	10.50		8	9			
FM1 B				17.0	30.9	30.9	7.06	7.05		7.06	95.7		94.6	95.2	30.4	30.4		24.70	23.00		16	18
FM2 S	20:30	Small wave	18.0	1.0	30.8	30.8	7.15	7.26	7.15	98.8	97.5	97.3	28.9	28.9	4.36	4.54	13.18	7	8	8.8		
FM2 M				9.0	30.8	30.8	7.09	7.08		96.5	96.4		29.8	29.8	21.60	20.10		10	10			
FM2 B				17.0	30.8	30.8	7.10	7.11		7.11	95.1		94.3	94.7	30.0	30.0		14.20	14.30		8	10
FC1 S	20:55	Small wave	23.0	1.0	30.8	30.9	7.16	7.13	7.11	97.5	98.1	96.9	28.9	28.9	3.95	3.91	9.84	10	10	9.7		
FC1 M				11.5	30.8	30.8	7.08	7.05		96.5	95.4		29.0	29.0	10.50	10.90		10	11			
FC1 B				22.0	30.8	30.8	6.93	6.92		6.93	93.1		92.5	92.8	29.8	29.8		15.40	14.40		8	9
FC2 S	20:15	Small wave	18.0	1.0	30.8	30.8	7.24	7.25	7.22	96.8	96.3	96.0	29.4	29.4	4.65	4.53	11.21	9	9	14.3		
FC2 M				9.0	30.8	30.8	7.19	7.18		95.6	95.1		29.6	29.6	14.20	14.50		15	14			
FC2 B				17.0	30.8	30.8	7.04	7.05		7.05	92.3		92.0	92.2	30.4	30.4		14.00	15.40		19	20
<b>Bold data with single underline indicates an exceedance to Action Level</b> <i>Italic data with double underline indicates an exceedance to Limit Level!</i>																						
Equipment used:		Dissolved Oxygen Meter:		EM	961	Calibration Check:		0mg/L: ok	100%: ok	Sampled By:												
		Turbidity Meter:		EM	2365	Calibration Check:		4.55, 45.8,	453	NTU	Checked By:											
		Salinity Meter:		EM	3694	Calibration Check:		58.8	mS	Date:												
		Thermometer:		ET	961																	

Project: Contract No. CV/2002/13 Fill Bank At Tuen Mun Area 3B										Client: Penta-Ocean Construction Co., Ltd.				Job No.: 4494.1							
Date of Sampling :		02/07/2004		Weather Condition: Sunny			Ambient Temperature, °C: 34			Tide State: Mid-Ebb											
Station	Time	Sea Condition	Overall Depth, m	Sampling Depth, m	Temperature, °C		Dissolved Oxygen, mg/L			Dissolved Oxygen, %			Salinity, ppt		Turbidity, NTU			Suspended Solids, mg/L		Remarks	
					a	b	a	b	Average	a	b	Average	a	b	a	b	Average		Depth		
FM1 S	13:05	Small wave	17.0	1.0	32.5	32.6	7.21	7.19	7.09	100.1	99.8	98.4	26.8	26.8	4.78	4.54	14.24	15	14	14.0	
FM1 M				8.5	32.5	32.5	6.98	6.97		97.2	96.3		26.7	26.7	19.80	20.10		14	17		
FM1 B				16.0	32.5	32.5	6.52	6.54		6.53	93.1		93.0	93.1	27.7	27.7		18.90	17.30		12
FM2 S	13:20	Small wave	17.0	1.0	32.5	32.5	7.29	7.32	7.13	100.6	100.7	98.5	27.0	27.0	5.50	5.71	16.70	10	10	10.2	
FM2 M				8.5	32.5	32.5	6.97	6.95		96.5	96.1		26.8	26.8	23.00	21.80		13	12		
FM2 B				16.0	32.5	32.5	6.54	6.52		6.53	92.2		91.7	92.0	27.5	27.5		22.50	21.70		8
FC1 S	12:45	Small wave	21.0	1.0	32.5	32.5	7.18	7.13	7.03	99.8	99.7	98.1	26.5	26.5	9.73	9.65	16.31	6	7	12.0	
FC1 M				10.5	32.5	32.5	6.96	6.86		96.3	96.5		26.6	26.6	8.13	8.24		15	14		
FC1 B				20.0	32.5	32.5	6.57	6.61		6.59	93.0		93.0	93.0	27.0	27.0		30.00	32.10		16
FC2 S	13:40	Small wave	17.0	1.0	32.6	32.6	7.23	7.25	7.04	100.7	100.3	98.3	26.9	26.9	3.08	3.42	10.12	11	9	11.7	
FC2 M				8.5	32.5	32.5	6.85	6.81		96.4	95.7		27.8	27.8	5.34	5.15		14	14		
FC2 B				16.0	32.4	32.4	6.59	6.62		6.61	91.5		90.7	91.1	28.0	28.0		21.30	22.40		11
<b>Bold data with single underline indicates an exceedance to Action Level</b> <i>Italic data with double underline indicates an exceedance to Limit Level!</i>																					
Equipment used:		Dissolved Oxygen Meter:		EM	961	Calibration Check:		0mg/L: ok	100%: ok	Sampled By:											
		Turbidity Meter:		EM	2365	Calibration Check:		4.56, 45.9, 454	NTU	Checked By:											
		Salinity Meter:		EM	3694	Calibration Check:		58.8	mS	Date:											
		Thermometer:		ET	961																

Project: <u>Contract No. CV/2002/13 Fill Bank At Tuen Mun Area 38</u>										Client: <u>Penta-Ocean Construction Co., Ltd.</u>			Job No.: <u>4494.1</u>									
Date of Sampling :		<u>06/07/2004</u>		Weather Condition: <u>Cloudy</u>			Ambient Temperature, °C: <u>30</u>			Tide State: <u>Mid-Ebb</u>												
Station	Time	Sea Condition	Overall Depth, m	Sampling Depth, m	Temperature, °C		Dissolved Oxygen, mg/L			Dissolved Oxygen, %			Salinity, ppt		Turbidity, NTU			Suspended Solids, mg/L		Remarks		
					a	b	a	b	Average	a	b	Average	a	b	a	b	Average	Depth	Average			
FM1 S	16:10	Small wave	17.0	1.0	30.0	30.1	7.51	7.46	7.34	109.7	108.2	103.0	25.0	25.0	3.88	3.64	5.28	12	13	15.5		
FM1 M				8.5	30.0	30.0	7.20	7.19		97.2	96.9		26.0	26.1	4.21	3.98		10	11			
FM1 B				16.0	30.0	30.0	7.18	7.17		7.18	95.1		94.5	94.8	26.7	26.7		8.00	7.99		23	24
FM2 S	16:15	Small wave	17.0	1.0	30.0	30.0	7.42	7.41	7.29	100.7	100.8	98.5	25.4	25.5	4.36	4.64	4.30	14	15	13.0		
FM2 M				8.5	30.0	30.0	7.16	7.17		95.6	96.7		25.9	25.9	3.87	4.14		10	11			
FM2 B				16.0	30.0	30.0	7.15	7.14		7.15	94.7		93.4	94.1	27.1	27.1		4.51	4.29		14	14
FC1 S	16:00	Small wave	21.0	1.0	30.0	30.0	7.38	7.34	7.25	100.6	100.4	98.9	24.8	24.8	5.13	4.76	4.51	12	11	17.5		
FC1 M				10.5	30.0	30.0	7.15	7.14		96.7	97.8		25.9	25.9	5.05	4.67		23	24			
FC1 B				20.0	30.0	30.0	7.16	7.12		7.14	92.5		93.1	92.8	27.2	27.2		3.73	3.70		17	18
FC2 S	16:25	Small wave	17.0	1.0	30.0	30.0	7.35	7.36	7.23	100.5	100.8	99.4	25.2	25.2	4.65	4.93	4.29	12	12	14.3		
FC2 M				8.5	30.0	30.0	7.10	7.09		98.7	97.6		26.0	26.0	4.04	4.40		16	14			
FC2 B				16.0	30.0	30.0	7.08	7.07		7.08	92.6		93.5	93.1	27.1	27.1		3.94	3.78		17	15
<b><u>Bold data with single underline indicates an exceedance to Action Level</u></b> <i><u>Italic data with double underline indicates an exceedance to Limit Level</u></i>																						
Equipment used:		Dissolved Oxygen Meter:		EM	961	Calibration Check:		0mg/L: ok	100%: ok	Sampled By:												
		Turbidity Meter:		EM	2365	Calibration Check:		4.51, 45.0,	450 NTU	Checked By:												
		Salinity Meter:		EM	3694	Calibration Check:		58.8	mS	Date:												
		Thermometer:		ET	961																	



Project: <u>Contract No. CV/2002/13 Fill Bank At Tuen Mun Area 3B</u>										Client: <u>Penta-Ocean Construction Co., Ltd.</u>		Job No.: <u>4494.1</u>									
Date of Sampling :		<u>08/07/2004</u>		Weather Condition:		<u>Sunny</u>		Ambient Temperature, °C:		<u>31</u>		Tide State:		<u>Mid-Flood</u>							
Station	Time	Sea Condition	Overall Depth, m	Sampling Depth, m	Temperature, °C		Dissolved Oxygen, mg/L			Dissolved Oxygen, %			Salinity, ppt		Turbidity, NTU			Suspended Solids, mg/L		Remarks	
					a	b	a	b	Average	a	b	Average	a	b	a	b	Average		Depth		
FM1 S	11:25	Big wave	18.0	1.0	30.5	30.5	6.25	6.31	6.37	91.4	92.0	93.2	28.4	28.4	1.96	1.92	2.11	5	5	5.7	
FM1 M				9.0	30.4	30.4	6.43	6.49		94.5	94.9		28.9	28.9	2.09	2.10		6	5		
FM1 B				17.0	30.4	30.4	5.86	5.77		5.82	82.6		82.9	82.8	29.3	29.4		2.24	2.35		6
FM2 S	11:15	Big wave	18.0	1.0	30.4	30.4	6.44	6.40	6.42	94.8	95.7	94.8	28.4	28.4	2.17	2.23	2.23	6	6	5.8	
FM2 M				9.0	30.4	30.4	6.43	6.40		94.2	94.4		29.0	29.0	2.19	2.24		6	5		
FM2 B				17.0	30.4	30.4	5.92	5.97		5.95	84.5		84.7	84.6	29.3	29.3		2.22	2.34		6
FC1 S	11:40	Big wave	23.0	1.0	30.4	30.4	6.82	6.94	6.72	99.5	99.1	97.5	28.0	28.0	2.23	2.51	2.54	5	5	6.0	
FC1 M				11.5	30.4	30.4	6.53	6.57		95.3	95.9		29.0	29.0	2.59	2.84		6	6		
FC1 B				22.0	30.4	30.4	6.02	6.10		6.06	87.2		87.5	87.4	29.3	29.3		2.57	2.49		7
FC2 S	11:00	Big wave	18.0	1.0	30.4	30.5	6.20	6.11	6.26	90.4	90.9	91.9	28.7	28.7	2.79	2.68	2.34	6	5	5.2	
FC2 M				9.0	30.5	30.5	6.39	6.34		93.5	92.9		29.1	29.1	2.08	2.16		4	4		
FC2 B				17.0	30.5	30.5	5.53	5.67		5.60	78.6		78.1	78.4	29.3	29.3		2.20	2.12		6
<b><u>Bold data with single underline indicates an exceedance to Action Level</u></b> <i><u>Italic data with double underline indicates an exceedance to Limit Level!</u></i>																					
Equipment used:		Dissolved Oxygen Meter:		EM	961	Calibration Check:		0mg/L: ok	100%: ok	Sampled By:											
		Turbidity Meter:		EM	2365	Calibration Check:		4.50, 45.2, 450	NTU	Checked By:											
		Salinity Meter:		EM	3694	Calibration Check:		58.8	mS	Date:											
		Thermometer:		ET	961																

Project: <u>Contract No. CV/2002/13 Fill Bank At Tuen Mun Area 3B</u>										Client: <u>Penta-Ocean Construction Co., Ltd.</u>		Job No.: <u>4494.1</u>								
Date of Sampling :		<u>08/07/2004</u>		Weather Condition:		<u>Cloudy</u>		Ambient Temperature, °C:		<u>30</u>		Tide State:		<u>Mid-Ebb</u>						
Station	Time	Sea Condition	Overall Depth, m	Sampling Depth, m	Temperature, °C		Dissolved Oxygen, mg/L			Dissolved Oxygen, %			Salinity, ppt		Turbidity, NTU		Suspended Solids, mg/L		Remarks	
					a	b	a	b	Average	a	b	Average	a	b	a	b	Average			Depth
FM1 S	17:45	Big wave	16.0	1.0	30.0	30.0	7.21	7.25	7.05	102.3	102.5	99.8	29.0	29.0	2.45	2.38	3.16	5	4	8.5
FM1 M				8.0	30.0	30.0	6.83	6.90		97.1	97.4		29.2	29.2	2.75	2.95		5	6	
FM1 B				15.0	30.0	30.0	6.42	6.52		6.47	93.5		94.2	93.9	29.5	29.5		4.06	4.38	
FM2 S	17:55	Big wave	16.0	1.0	30.0	30.0	7.04	7.06	6.90	100.0	100.2	98.3	29.0	29.0	2.57	2.46	2.58	6	6	7.7
FM2 M				8.0	30.0	30.0	6.71	6.77		96.2	96.9		29.2	29.2	2.51	2.50		8	9	
FM2 B				15.0	30.0	30.0	6.33	6.35		6.34	92.6		92.1	92.4	29.5	29.5		2.73	2.71	
FC1 S	17:30	Big wave	21.0	1.0	30.0	30.0	7.27	7.38	7.15	102.6	102.4	101.1	29.0	29.0	2.45	2.44	2.78	5	5	8.0
FC1 M				10.5	30.0	30.0	7.01	6.93		99.8	99.4		29.3	29.2	3.09	2.89		9	10	
FC1 B				20.0	30.0	30.0	6.54	6.46		6.50	94.1		93.5	93.8	29.4	29.4		2.99	2.81	
FC2 S	18:10	Big wave	17.0	1.0	30.0	30.0	7.01	6.90	6.75	99.9	98.7	96.7	29.2	29.2	3.14	3.01	3.81	7	6	9.2
FC2 M				8.5	30.0	30.0	6.52	6.55		93.9	94.2		29.3	29.3	3.94	4.12		8	7	
FC2 B				16.0	30.0	30.0	6.04	6.06		6.05	88.1		88.7	88.4	29.4	29.4		4.23	4.44	
<b><u>Bold data with single underline indicates an exceedance to Action Level</u></b> <i><u>Italic data with double underline indicates an exceedance to Limit Level!</u></i>																				
Equipment used:		Dissolved Oxygen Meter:		EM	961	Calibration Check:		0mg/L: ok	100%: ok	Sampled By:										
		Turbidity Meter:		EM	2365	Calibration Check:		4.54, 45.7, 454	NTU	Checked By:										
		Salinity Meter:		EM	3694	Calibration Check:		58.8	mS	Date:										
		Thermometer:		ET	961															

Project: <u>Contract No. CV/2002/13 Fill Bank At Tuen Mun Area 3B</u>										Client: <u>Penta-Ocean Construction Co., Ltd.</u>		Job No.: <u>4494.1</u>									
Date of Sampling :		<u>10/07/2004</u>		Weather Condition:		<u>Sunny</u>		Ambient Temperature, °C:		<u>32</u>		Tide State:		<u>Mid-Flood</u>							
Station	Time	Sea Condition	Overall Depth, m	Sampling Depth, m	Temperature, °C		Dissolved Oxygen, mg/L			Dissolved Oxygen, %			Salinity, ppt		Turbidity, NTU			Suspended Solids, mg/L		Remarks	
					a	b	a	b	Average	a	b	Average	a	b	a	b	Average	a	b		Average
FM1 S	13:55	Small wave	18.0	1.0	28.8	28.8	6.56	6.57	6.38	97.8	97.6	93.6	27.0	27.0	2.71	2.82	2.97	4	5	5.8	
FM1 M				9.0	28.5	28.5	6.21	6.19		89.4	89.5		27.2	27.2	3.39	3.22		6	5		
FM1 B				17.0	28.2	28.2	6.10	6.11		6.11	88.4		88.3	88.4	27.3	27.3		2.91	2.75		8
FM2 S	13:45	Small wave	18.0	1.0	29.1	29.0	6.48	6.45	6.33	96.7	97.1	92.8	27.2	27.1	3.51	3.21	3.03	7	7	6.0	
FM2 M				9.0	28.6	28.6	6.20	6.18		88.4	89.1		27.2	27.2	2.18	2.49		6	6		
FM2 B				17.0	28.4	28.4	6.17	6.15		6.16	88.1		88.3	88.2	27.3	27.3		3.58	3.19		5
FC1 S	14:10	Small wave	23.0	1.0	28.4	28.4	6.57	6.59	6.37	97.4	97.6	93.5	26.8	26.8	2.43	2.55	2.57	6	5	7.7	
FC1 M				11.5	27.7	27.7	6.18	6.15		89.4	89.5		27.0	27.0	3.03	2.82		8	9		
FC1 B				22.0	27.6	27.6	6.09	6.08		6.09	87.3		87.5	87.4	27.2	27.2		2.38	2.23		9
FC2 S	13:30	Small wave	18.0	1.0	27.9	27.9	6.39	6.41	6.19	95.2	95.4	90.5	27.2	27.2	2.41	2.36	2.64	9	9	7.5	
FC2 M				9.0	27.4	27.4	5.97	5.98		85.6	85.7		27.4	27.4	3.00	2.95		7	7		
FC2 B				17.0	27.2	27.2	5.67	5.61		5.64	85.4		85.0	85.2	27.5	27.5		2.56	2.55		7
<b><u>Bold data with single underline indicates an exceedance to Action Level</u></b> <i><u>Italic data with double underline indicates an exceedance to Limit Level</u></i>																					
Equipment used:		Dissolved Oxygen Meter:		EM	961	Calibration Check:		0mg/L: ok	100%: ok	Sampled By:											
		Turbidity Meter:		EM	2365	Calibration Check:		4.54, 45.2, 455	NTU	Checked By:											
		Salinity Meter:		EM	3694	Calibration Check:		58.8	mS	Date:											
		Thermometer:		ET	961																

Project: <u>Contract No. CV/2002/13 Fill Bank At Tuen Mun Area 38</u>										Client: <u>Penta-Ocean Construction Co., Ltd.</u>			Job No.: <u>4494.1</u>									
Date of Sampling :		<u>10/07/2004</u>		Weather Condition: <u>Sunny</u>			Ambient Temperature, °C: <u>31</u>			Tide State: <u>Mid-Ebb</u>												
Station	Time	Sea Condition	Overall Depth, m	Sampling Depth, m	Temperature, °C		Dissolved Oxygen, mg/L			Dissolved Oxygen, %			Salinity, ppt		Turbidity, NTU			Suspended Solids, mg/L		Remarks		
					a	b	a	b	Average	a	b	Average	a	b	a	b	Average		Depth			
FM1 S	08:15	Big wave	17.0	1.0	27.1	27.1	6.45	6.47	6.29	97.9	98.1	98.0	27.0	27.0	3.01	2.82	3.78	6	6	5.8		
FM1 M				8.5	26.9	26.8	6.12	6.11		98.1	98.0		27.2	27.2	3.66	3.37		6	6			
FM1 B				16.0	26.3	26.3	6.10	6.09		6.10	88.4		88.5	88.5	27.5	27.5		4.78	5.01		6	5
FM2 S	08:25	Big wave	17.0	1.0	27.1	27.1	6.51	6.53	6.39	96.2	95.7	96.1	27.0	27.0	3.24	3.37	4.75	7	6	7.8		
FM2 M				8.5	26.7	26.7	6.27	6.26		96.7	95.7		27.2	27.2	3.67	3.80		8	8			
FM2 B				16.0	26.3	26.3	6.17	6.18		6.18	89.6		90.2	89.9	27.5	27.5		7.08	7.33		9	9
FC1 S	08:00	Big wave	22.0	1.0	27.2	27.2	6.81	6.79	6.27	95.7	96.1	94.9	27.0	27.0	4.22	4.04	4.95	8	9	8.2		
FC1 M				11.0	26.9	26.9	5.74	5.75		94.2	93.7		27.2	27.2	3.92	4.15		7	8			
FC1 B				21.0	26.4	26.4	5.74	5.71		5.73	89.5		89.6	89.6	27.4	27.4		6.51	6.83		9	8
FC2 S	08:40	Big wave	17.0	1.0	27.2	27.2	6.72	6.74	6.32	94.1	93.1	93.0	27.1	27.1	3.76	3.75	6.27	5	5	5.2		
FC2 M				8.5	27.1	27.1	5.90	5.92		92.5	92.1		27.2	27.2	7.37	7.22		5	5			
FC2 B				16.0	26.7	26.7	5.87	5.83		5.85	85.1		86.4	85.8	27.6	27.6		7.70	7.81		5	6
<b><u>Bold data with single underline indicates an exceedance to Action Level</u></b> <i><u>Italic data with double underline indicates an exceedance to Limit Level</u></i>																						
Equipment used:		Dissolved Oxygen Meter:		EM	961	Calibration Check:		0mg/L: ok	100%: ok	Sampled By:												
		Turbidity Meter:		EM	2365	Calibration Check:		4.53, 45.7,	456	NTU	Checked By:											
		Salinity Meter:		EM	3694	Calibration Check:		58.8	mS	Date:												
		Thermometer:		ET	961																	

Project: <u>Contract No. CV/2002/13 Fill Bank At Tuen Mun Area 3B</u>										Client: <u>Penta-Ocean Construction Co., Ltd.</u>		Job No.: <u>4494.1</u>									
Date of Sampling :		<u>12/07/2004</u>		Weather Condition:		<u>Sunny</u>		Ambient Temperature, °C:		<u>32</u>		Tide State:		<u>Mid-Flood</u>							
Station	Time	Sea Condition	Overall Depth, m	Sampling Depth, m	Temperature, °C		Dissolved Oxygen, mg/L			Dissolved Oxygen, %			Salinity, ppt		Turbidity, NTU		Suspended Solids, mg/L			Remarks	
					a	b	a	b	Average	a	b	Average	a	b	a	b	Average				Depth Average
FM1 S	16:45	Small wave	20.0	1.0	27.4	27.4	6.43	6.40	6.26	98.1	97.8	98.0	28.0	28.0	2.87	3.12	3.30	6	6	6.3	
FM1 M				10.0	26.8	26.8	6.10	6.11		97.9	98.1		28.5	28.5	3.35	3.28		5	7		
FM1 B				19.0	26.9	26.9	6.07	6.08		6.08	89.5		88.4	89.0	29.1	29.1		3.48	3.70		7
FM2 S	17:00	Small wave	20.0	1.0	27.2	27.3	6.53	6.55	6.41	96.1	95.9	96.1	28.1	28.1	3.31	3.10	3.03	8	8	7.3	
FM2 M				10.0	26.4	26.3	6.27	6.28		96.7	95.6		28.5	28.5	2.89	3.01		6	6		
FM2 B				19.0	26.4	26.3	6.17	6.18		6.18	88.4		88.5	88.5	29.1	29.2		3.09	2.80		8
FC1 S	16:30	Small wave	24.0	1.0	27.3	27.5	6.82	6.83	6.29	96.7	96.5	95.3	28.0	28.0	3.23	3.11	3.16	5	6	6.0	
FC1 M				12.0	26.2	26.3	5.74	5.75		94.3	93.7		28.4	28.4	3.06	2.83		5	7		
FC1 B				23.0	26.1	26.1	5.55	5.56		5.56	88.9		89.4	89.2	29.0	29.0		3.22	3.48		6
FC2 S	17:15	Small wave	21.0	1.0	27.1	27.1	6.71	6.73	6.31	94.3	93.2	93.3	28.0	28.0	2.34	2.49	3.98	5	5	6.5	
FC2 M				10.5	26.1	26.1	5.90	5.91		92.3	93.5		28.5	28.5	5.28	4.84		8	8		
FC2 B				20.0	25.7	25.7	5.86	5.87		5.87	85.1		86.3	85.7	29.2	29.2		4.47	4.47		7
<b><u>Bold data with single underline indicates an exceedance to Action Level</u></b> <i><u>Italic data with double underline indicates an exceedance to Limit Level!</u></i>																					
Equipment used:		Dissolved Oxygen Meter:		EM	961	Calibration Check:		0mg/L: ok	100%: ok	Sampled By:											
		Turbidity Meter:		EM	2365	Calibration Check:		4.51, 45.4, 455	NTU	Checked By:											
		Salinity Meter:		EM	3694	Calibration Check:		58.8	mS	Date:											
		Thermometer:		ET	961																

Project: <u>Contract No. CV/2002/13 Fill Bank At Tuen Mun Area 38</u>										Client: <u>Penta-Ocean Construction Co., Ltd.</u>			Job No.: <u>4494.1</u>									
Date of Sampling :		<u>12/07/2004</u>		Weather Condition: <u>Sunny</u>			Ambient Temperature, °C: <u>31</u>			Tide State: <u>Mid-Ebb</u>												
Station	Time	Sea Condition	Overall Depth, m	Sampling Depth, m	Temperature, °C		Dissolved Oxygen, mg/L			Dissolved Oxygen, %			Salinity, ppt		Turbidity, NTU			Suspended Solids, mg/L		Remarks		
					a	b	a	b	Average	a	b	Average	a	b	a	b	Average	Depth	Average			
FM1 S	10:25	Small wave	18.0	1.0	27.1	27.1	6.41	6.42	6.27	97.9	98.1	98.1	27.9	27.9	2.70	2.80	2.88	7	5	5.5		
FM1 M				9.0	26.9	26.9	6.11	6.13		98.2	98.1		28.2	28.2	3.06	3.11		5	5			
FM1 B				17.0	26.3	26.3	6.08	6.09		6.09	88.4		88.5	88.5	28.4	28.4		2.81	2.81		5	6
FM2 S	10:15	Small wave	18.0	1.0	27.1	27.1	6.52	6.54	6.40	96.2	95.7	96.1	28.0	28.0	2.80	2.80	3.10	7	6	7.2		
FM2 M				9.0	26.9	26.9	6.27	6.26		96.7	95.7		28.2	28.2	2.99	3.19		7	7			
FM2 B				17.0	26.4	26.4	6.18	6.19		6.19	89.7		88.4	89.1	28.4	28.4		3.27	3.56		8	8
FC1 S	10:40	Small wave	22.0	1.0	27.3	27.3	6.81	6.79	6.26	96.6	96.7	95.3	27.7	27.7	2.74	2.92	2.93	6	7	7.5		
FC1 M				11.0	27.1	27.1	5.72	5.73		94.2	93.6		27.9	27.9	3.22	3.48		8	9			
FC1 B				21.0	26.7	26.7	5.74	5.75		5.75	89.4		89.5	89.5	28.1	28.1		2.68	2.52		7	8
FC2 S	10:00	Small wave	18.0	1.0	27.1	27.1	6.72	6.74	6.32	94.1	93.1	93.0	28.3	28.3	3.29	3.46	3.25	6	7	7.5		
FC2 M				9.0	26.7	26.7	5.90	5.91		92.5	92.3		28.5	28.5	3.49	3.23		7	8			
FC2 B				17.0	26.1	26.1	5.86	5.83		5.85	85.1		86.5	85.8	28.8	28.8		2.94	3.09		8	9
<b>Bold data with single underline indicates an exceedance to Action Level</b> <i>Italic data with double underline indicates an exceedance to Limit Level!</i>																						
Equipment used:		Dissolved Oxygen Meter:		EM	961	Calibration Check:		0mg/L: ok	100%: ok	Sampled By:												
		Turbidity Meter:		EM	2365	Calibration Check:		4.57, 45.1,	451 NTU	Checked By:												
		Salinity Meter:		EM	3694	Calibration Check:		58.7	mS	Date:												
		Thermometer:		ET	961																	

Project: <u>Contract No. CV/2002/13 Fill Bank At Tuen Mun Area 3B</u>										Client: <u>Penta-Ocean Construction Co., Ltd.</u>		Job No.: <u>4494.1</u>									
Date of Sampling :		<u>14/07/2004</u>		Weather Condition:		<u>Cloudy</u>		Ambient Temperature, °C:		<u>30</u>		Tide State:		<u>Mid-Flood</u>							
Station	Time	Sea Condition	Overall Depth, m	Sampling Depth, m	Temperature, °C		Dissolved Oxygen, mg/L			Dissolved Oxygen, %			Salinity, ppt		Turbidity, NTU		Suspended Solids, mg/L		Remarks		
					a	b	a	b	Average	a	b	Average	a	b	a	b	Average	a		b	Depth
FM1 S	19:10	Small wave	18.0	1.0	30.5	30.5	6.84	6.85	6.68	97.4	97.3	94.9	31.8	31.8	1.18	1.34	5.22	6	6	6.5	
FM1 M				9.0	27.8	27.6	6.52	6.51		92.1	92.9		34.2	34.2	6.86	7.01		6	7		
FM1 B				17.0	26.7	26.8	6.43	6.41		6.42	91.5		91.6	91.6	31.9	31.9		7.60	7.34		7
FM2 S	19:00	Small wave	18.0	1.0	30.1	30.2	6.96	6.97	6.73	96.4	97.1	94.3	30.7	30.7	3.99	4.28	3.82	6	7	6.8	
FM2 M				9.0	27.9	27.7	6.49	6.51		91.7	92.1		31.6	31.6	3.48	3.54		6	7		
FM2 B				17.0	25.1	25.2	6.23	6.19		6.21	90.4		90.2	90.3	31.6	31.7		3.95	3.66		7
FC1 S	19:20	Small wave	23.0	1.0	29.7	29.8	6.75	6.73	6.35	97.5	97.6	93.3	31.7	31.7	5.82	6.10	5.28	5	5	6.2	
FC1 M				11.5	28.1	28.0	5.94	5.97		89.5	88.6		31.0	31.1	3.61	3.57		6	5		
FC1 B				22.0	26.5	26.5	5.81	5.80		5.81	87.1		87.6	87.4	34.5	34.5		6.19	6.38		8
FC2 S	18:45	Small wave	18.0	1.0	28.8	28.9	6.72	6.74	6.30	98.1	98.4	92.5	33.7	33.7	5.74	5.20	4.60	6	5	6.8	
FC2 M				9.0	26.4	26.5	5.86	5.87		86.4	87.1		32.6	32.6	4.74	4.85		7	6		
FC2 B				17.0	25.1	25.2	5.64	5.65		5.65	85.4		85.1	85.3	32.6	32.6		3.35	3.70		9
<b>Bold data with single underline indicates an exceedance to Action Level</b>																					
<i>Italic data with double underline indicates an exceedance to Limit Level</i>																					
Equipment used:		Dissolved Oxygen Meter:		EM	961	Calibration Check:		0mg/L: ok	100%: ok	Sampled By:											
		Turbidity Meter:		EM	2365	Calibration Check:		4.57, 45.2, 454	NTU	Checked By:											
		Salinity Meter:		EM	3694	Calibration Check:		58.8	mS	Date:											
		Thermometer:		ET	961																

Project: <u>Contract No. CV/2002/13 Fill Bank At Tuen Mun Area 3B</u>										Client: <u>Penta-Ocean Construction Co., Ltd.</u>		Job No.: <u>4494.1</u>									
Date of Sampling :		<u>14/07/2004</u>		Weather Condition:		<u>Sunny</u>		Ambient Temperature, °C:		<u>32</u>		Tide State:		<u>Mid-Ebb</u>							
Station	Time	Sea Condition	Overall Depth, m	Sampling Depth, m	Temperature, °C		Dissolved Oxygen, mg/L			Dissolved Oxygen, %			Salinity, ppt		Turbidity, NTU			Suspended Solids, mg/L			Remarks
					a	b	a	b	Average	a	b	Average	a	b	a	b	Average	a	b	Average	
FM1 S	11:35	Small wave	17.0	1.0	29.5	29.5	6.85	6.84	6.75	97.3	97.8	96.9	30.4	30.4	1.31	1.31	6.11	4	3	6.3	
FM1 M				8.5	27.9	27.8	6.64	6.68		96.3	96.1		32.1	32.1	8.55	8.10		6	6		
FM1 B				16.0	26.7	26.5	6.53	6.49		6.51	92.4		91.9	92.2	34.5	34.5		8.96	8.40		9
FM2 S	11:45	Small wave	17.0	1.0	29.4	29.4	6.84	6.79	6.72	97.2	96.9	96.8	32.0	32.0	4.16	4.22	5.31	6	5	5.7	
FM2 M				8.5	27.2	27.2	6.63	6.62		96.1	96.8		32.2	32.2	3.72	4.28		6	5		
FM2 B				16.0	25.3	25.3	6.58	6.49		6.54	93.1		94.1	93.6	32.2	32.2		7.54	7.93		6
FC1 S	11:15	Small wave	22.0	1.0	28.9	29.0	6.83	6.82	6.75	98.1	97.8	97.3	34.8	34.8	6.73	6.72	5.73	5	5	5.3	
FC1 M				11.0	27.4	27.4	6.68	6.67		96.9	96.4		34.8	34.8	4.97	5.30		5	6		
FC1 B				21.0	26.1	26.0	6.49	6.50		6.50	92.9		92.5	92.7	33.7	33.7		4.95	5.68		5
FC2 S	12:00	Small wave	17.0	1.0	28.8	28.8	6.82	6.81	6.75	97.9	97.1	96.6	32.4	32.4	3.21	3.48	4.11	6	5	6.3	
FC2 M				8.5	27.2	27.2	6.67	6.71		95.4	96.1		34.7	34.8	4.64	4.63		6	6		
FC2 B				16.0	26.3	26.3	6.50	6.45		6.48	93.1		93.2	93.2	34.0	34.0		4.62	4.07		8
<b><u>Bold data with single underline indicates an exceedance to Action Level</u></b> <i><u>Italic data with double underline indicates an exceedance to Limit Level!</u></i>																					
Equipment used:		Dissolved Oxygen Meter:		EM	961	Calibration Check:		0mg/L: ok	100%: ok	Sampled By:											
		Turbidity Meter:		EM	2365	Calibration Check:		4.59, 46.0, 455	NTU	Checked By:											
		Salinity Meter:		EM	3694	Calibration Check:		58.8	mS	Date:											
		Thermometer:		ET	961																



Project: Contract No. CV/2002/13 Fill Bank At Tuen Mun Area 38										Client: Penta-Ocean Construction Co., Ltd.			Job No.: 4494.1								
Date of Sampling :		20/07/2004		Weather Condition:			Rainy			Ambient Temperature, °C:			30		Tide State:		Mid-Flood				
Station	Time	Sea Condition	Overall Depth, m	Sampling Depth, m	Temperature, °C			Dissolved Oxygen, mg/L			Dissolved Oxygen, %			Salinity, ppt		Turbidity, NTU		Suspended Solids, mg/L		Remarks	
					a	b	Average	a	b	Average	a	b	Average	a	b	Average	a	b	Average		Depth
FM1 S	08:00	Medium wave	18.0	1.0	28.1	28.0	6.97	6.95	6.85	98.9	98.2	97.6	25.8	25.9	3.25	3.24	3.56	8	9	8.5	
FM1 M				9.0	27.1	27.1	6.71	6.78		98.1	95.3		28.4	28.5	3.61	3.82		8	9		
FM1 B				17.0	26.1	26.1	6.53	6.62		6.58	84.3		85.6	85.0	30.3	30.5		3.89	3.56		9
FM2 S	08:15	Medium wave	18.0	1.0	29.2	29.1	6.98	6.91	6.83	89.1	90.3	84.2	26.4	26.5	3.12	3.10	4.07	7	8	8.5	
FM2 M				9.0	27.1	27.1	6.71	6.73		79.1	78.2		29.4	29.4	4.23	4.26		8	9		
FM2 B				17.0	26.3	26.3	6.58	6.51		6.55	74.3		74.8	74.6	30.5	30.4		4.76	4.95		9
FC1 S	07:45	Medium wave	23.0	1.0	29.1	29.1	6.91	6.83	6.72	99.1	98.2	97.5	26.7	26.7	2.16	2.18	3.02	10	8	9.5	
FC1 M				11.5	27.1	27.1	6.71	6.42		98.1	94.5		29.9	29.5	3.07	3.09		11	9		
FC1 B				22.0	26.1	26.1	6.51	6.59		6.55	90.8		94.3	92.6	31.0	31.0		3.68	3.92		10
FC2 S	08:30	Medium wave	18.0	1.0	29.1	29.1	6.93	6.71	6.68	97.1	98.4	96.8	29.3	29.4	2.29	3.05	3.41	8	7	8.5	
FC2 M				9.0	27.3	27.3	6.49	6.59		95.2	96.3		30.1	30.2	3.69	3.05		8	9		
FC2 B				17.0	25.7	25.8	6.71	6.43		6.57	88.9		89.4	89.2	31.0	31.0		4.18	4.17		10
<b>Bold data with single underline indicates an exceedance to Action Level</b> <i>Italic data with double underline indicates an exceedance to Limit Level</i>																					
Equipment used:		Dissolved Oxygen Meter:		EM	961	Calibration Check:		0mg/L: ok	100%: ok	Sampled By:											
		Turbidity Meter:		EM	2365	Calibration Check:		4.61, 45.7, 461	NTU	Checked By:											
		Salinity Meter:		EM	3694	Calibration Check:		58.6	mS	Date:											
		Thermometer:		ET	961																

Project: <u>Contract No. CV/2002/13 Fill Bank At Tuen Mun Area 3B</u>										Client: <u>Penta-Ocean Construction Co., Ltd.</u>		Job No.: <u>4494.1</u>									
Date of Sampling :		<u>20/07/2004</u>		Weather Condition:		<u>Sunny</u>		Ambient Temperature, °C:		<u>31</u>		Tide State:		<u>Mid-Ebb</u>							
Station	Time	Sea Condition	Overall Depth, m	Sampling Depth, m	Temperature, °C		Dissolved Oxygen, mg/L			Dissolved Oxygen, %			Salinity, ppt		Turbidity, NTU		Suspended Solids, mg/L		Remarks		
					a	b	a	b	Average	a	b	Average	a	b	a	b	Average			Depth Average	
FM1 S	15:30	Medium wave	17.0	1.0	29.1	29.1	6.91	6.89	6.76	97.9	98.2	98.4	26.3	26.3	2.56	2.62	4.01	7	7	8.0	
FM1 M				8.5	27.8	27.8	6.71	6.53		99.1	98.4		29.0	29.0	4.49	4.73		7	7		
FM1 B				16.0	26.1	26.1	6.49	6.52		6.51	89.5		88.2	88.9	30.5	30.5		4.87	4.79		11
FM2 S	15:15	Medium wave	17.0	1.0	28.3	28.3	6.90	6.84	6.82	88.5	90.1	84.0	27.1	27.2	3.06	3.06	4.74	7	6	8.2	
FM2 M				8.5	27.1	27.1	6.81	6.73		78.1	79.2		30.3	30.5	5.01	5.02		11	9		
FM2 B				16.0	28.3	28.3	6.42	6.58		6.50	73.3		74.1	73.7	31.0	31.0		6.28	6.02		9
FC1 S	15:45	Medium wave	22.0	1.0	29.1	29.1	6.79	6.89	6.73	98.4	96.3	94.9	27.3	27.5	2.16	2.38	3.97	9	7	7.7	
FC1 M				11.0	26.8	26.8	6.70	6.53		93.2	91.8		29.1	29.1	4.53	4.52		9	7		
FC1 B				21.0	26.1	26.1	6.45	6.54		6.50	89.1		88.1	88.6	31.5	31.5		5.10	5.13		7
FC2 S	15:00	Medium wave	17.0	1.0	29.1	29.1	6.93	6.84	6.80	99.5	98.7	96.9	26.8	26.9	2.10	2.10	3.92	7	7	7.3	
FC2 M				8.5	27.1	27.1	6.71	6.70		94.3	95.2		28.8	28.9	3.59	3.88		6	7		
FC2 B				16.0	25.8	25.8	6.54	6.50		6.52	88.1		87.5	87.8	31.3	31.2		5.76	6.09		8
<b><u>Bold data with single underline indicates an exceedance to Action Level</u></b> <i><u>Italic data with double underline indicates an exceedance to Limit Level!</u></i>																					
Equipment used:		Dissolved Oxygen Meter:		EM	961	Calibration Check:		0mg/L: ok	100%: ok	Sampled By:											
		Turbidity Meter:		EM	2365	Calibration Check:		4.53, 46.2, 458	NTU	Checked By:											
		Salinity Meter:		EM	3694	Calibration Check:		58.7	mS	Date:											
		Thermometer:		ET	961																

Project: <u>Contract No. CV/2002/13 Fill Bank At Tuen Mun Area 38</u>										Client: <u>Penta-Ocean Construction Co., Ltd.</u>			Job No.: <u>4494.1</u>									
Date of Sampling :		<u>22/07/2004</u>		Weather Condition:		<u>Sunny</u>		Ambient Temperature, °C:		<u>32</u>		Tide State:		<u>Mid-Flood</u>								
Station	Time	Sea Condition	Overall Depth, m	Sampling Depth, m	Temperature, °C		Dissolved Oxygen, mg/L			Dissolved Oxygen, %			Salinity, ppt		Turbidity, NTU			Suspended Solids, mg/L		Remarks		
					a	b	a	b	Average	a	b	Average	a	b	a	b	Average	Depth	Average			
FM1 S	09:45	Big wave	18.0	1.0	28.1	28.1	6.95	6.98	6.84	99.9	99.0	94.1	28.4	28.4	3.22	3.00	2.72	5	5	6.2		
FM1 M				9.0	27.5	27.5	6.71	6.72		88.3	89.1		30.4	30.5	2.33	2.45		6	6			
FM1 B				17.0	26.1	26.1	6.54	6.53		6.54	84.1		85.6	84.9	32.1	32.0		2.59	2.71		7	8
FM2 S	09:30	Big wave	18.0	1.0	28.1	28.1	6.98	6.94	6.94	98.7	99.5	97.7	28.0	28.0	3.76	3.80	3.50	6	7	6.8		
FM2 M				9.0	27.1	27.1	6.93	6.89		97.3	95.2		30.6	30.8	3.73	3.79		7	7			
FM2 B				17.0	26.4	26.4	6.52	6.53		6.53	85.3		84.2	84.8	31.9	31.9		2.92	2.99		7	7
FC1 S	10:00	Big wave	23.0	1.0	28.4	28.4	6.91	6.89	6.87	99.2	98.3	97.1	27.7	27.9	3.29	3.35	3.13	7	8	6.5		
FC1 M				11.5	28.3	28.3	6.83	6.84		94.5	96.2		31.0	31.0	3.30	3.15		6	6			
FC1 B				22.0	26.4	26.5	6.61	6.69		6.65	86.2		85.3	85.8	31.4	31.4		2.77	2.89		6	6
FC2 S	09:15	Big wave	18.0	1.0	28.4	28.4	6.84	6.92	6.82	98.3	97.9	97.0	29.9	29.9	3.34	3.46	4.15	6	7	6.2		
FC2 M				9.0	27.5	27.5	6.70	6.83		95.3	96.4		30.1	30.2	4.56	4.61		6	7			
FC2 B				17.0	25.3	25.3	6.59	6.54		6.57	87.5		88.6	88.1	30.5	30.5		4.42	4.50		6	5
<b>Bold data with single underline indicates an exceedance to Action Level</b>																						
<i>Italic data with double underline indicates an exceedance to Limit Level!</i>																						
Equipment used:	Dissolved Oxygen Meter:		EM	961	Calibration Check:		0mg/L: ok	100%: ok	Sampled By:													
	Turbidity Meter:		EM	2365	Calibration Check:		<u>4.54,</u> <u>45.9,</u> <u>456</u>	NTU	Checked By:													
	Salinity Meter:		EM	3694	Calibration Check:		<u>58.7</u>	mS	Date:													
	Thermometer:		ET	961																		

Project: <u>Contract No. CV/2002/13 Fill Bank At Tuen Mun Area 38</u>										Client: <u>Penta-Ocean Construction Co., Ltd.</u>		Job No.: <u>4494.1</u>									
Date of Sampling :		<u>22/07/2004</u>		Weather Condition:		<u>Sunny</u>		Ambient Temperature, °C:		<u>32</u>		Tide State:		<u>Mid-Ebb</u>							
Station	Time	Sea Condition	Overall Depth, m	Sampling Depth, m	Temperature, °C		Dissolved Oxygen, mg/L			Dissolved Oxygen, %			Salinity, ppt		Turbidity, NTU			Suspended Solids, mg/L		Remarks	
					a	b	a	b	Average	a	b	Average	a	b	a	b	Average		Depth		Average
FM1 S	16:25	Medium wave	17.0	1.0	28.2	28.2	6.96	6.95	6.84	98.9	98.1	97.2	29.5	29.5	3.26	3.21	3.27	7	6	6.2	
FM1 M				8.5	26.9	27.0	6.72	6.73		95.3	96.4		30.3	30.3	3.59	3.62		6	6		
FM1 B				16.0	25.1	25.1	6.64	6.54		6.59	85.3		86.9	86.1	31.0	31.0		2.97	2.99		6
FM2 S	16:40	Medium wave	17.0	1.0	28.2	28.2	6.97	6.94	6.93	94.2	97.3	95.8	29.0	29.0	3.12	3.10	3.43	5	6	5.8	
FM2 M				8.5	27.4	27.4	6.96	6.84		95.3	96.4		29.5	29.5	3.23	3.26		6	6		
FM2 B				16.0	25.9	25.9	6.52	6.54		6.53	89.5		88.9	89.2	31.0	31.0		3.93	3.95		6
FC1 S	16:10	Medium wave	22.0	1.0	28.1	28.1	6.89	6.92	6.85	97.9	98.4	96.8	30.1	30.2	4.17	4.15	3.54	6	7	6.5	
FC1 M				11.0	27.9	27.9	6.77	6.81		94.9	95.8		31.1	31.1	2.07	2.10		6	7		
FC1 B				21.0	26.2	26.4	6.64	6.65		6.65	88.4		85.9	87.2	31.5	31.5		4.38	4.35		6
FC2 S	16:55	Medium wave	17.0	1.0	28.2	28.2	6.82	6.89	6.78	98.5	96.4	97.3	28.8	28.7	4.52	4.47	4.30	6	5	6.5	
FC2 M				8.5	27.9	27.9	6.71	6.70		96.5	97.8		30.3	30.5	3.41	3.56		7	7		
FC2 B				16.0	26.4	26.4	6.54	6.52		6.53	84.7		88.9	86.8	31.5	31.5		4.90	4.95		7
<b>Bold data with single underline indicates an exceedance to Action Level</b>																					
<i>Italic data with double underline indicates an exceedance to Limit Level</i>																					
Equipment used:		Dissolved Oxygen Meter:		EM	961	Calibration Check:		0mg/L: ok	100%: ok	Sampled By:											
		Turbidity Meter:		EM	2365	Calibration Check:		4.56, 46.8,	465 NTU	Checked By:											
		Salinity Meter:		EM	3694	Calibration Check:		58.8	mS	Date:											
		Thermometer:		ET	961																

Project: <u>Contract No. CV/2002/13 Fill Bank At Tuen Mun Area 3B</u>										Client: <u>Penta-Ocean Construction Co., Ltd.</u>		Job No.: <u>4494.1</u>										
Date of Sampling :		<u>24/07/2004</u>		Weather Condition:		<u>Sunny</u>		Ambient Temperature, °C:		<u>29</u>		Tide State:		<u>Mid-Flood</u>								
Station	Time	Sea Condition	Overall Depth, m	Sampling Depth, m	Temperature, °C		Dissolved Oxygen, mg/L			Dissolved Oxygen, %			Salinity, ppt		Turbidity, NTU			Suspended Solids, mg/L		Remarks		
					a	b	a	b	Average	a	b	Average	a	b	a	b	Average		Depth			
FM1 S	11:25	Small wave	18.0	1.0	28.5	28.5	7.00	6.99	6.88	97.9	98.1	96.1	26.4	26.5	1.54	1.58	1.56	4	4	4.3		
FM1 M				9.0	27.1	27.1	6.75	6.76		94.1	94.3		27.7	27.7	1.14	1.29		4	4			
FM1 B				17.0	26.4	26.5	6.21	6.19		6.20	89.2		89.4	89.3	27.6	27.6		1.86	1.92		5	5
FM2 S	11:15	Small wave	18.0	1.0	28.5	28.5	6.95	6.97	6.86	96.5	96.4	94.9	26.9	27.0	2.34	2.26	1.92	5	5	4.0		
FM2 M				9.0	27.2	27.2	6.75	6.76		93.1	93.4		27.3	27.3	1.55	1.67		3	3			
FM2 B				17.0	26.2	26.2	6.26	6.23		6.25	88.1		87.2	87.7	27.2	27.2		1.83	1.87		4	4
FC1 S	11:40	Small wave	23.0	1.0	28.5	28.5	7.01	7.02	6.85	96.7	96.4	94.6	26.5	26.5	2.05	2.13	1.98	4	4	4.5		
FC1 M				11.5	27.5	27.5	6.64	6.71		92.5	92.6		26.1	26.1	2.41	2.49		5	5			
FC1 B				22.0	26.1	26.1	6.30	6.21		6.26	88.2		89.3	88.8	25.2	25.2		1.35	1.44		4	5
FC2 S	11:00	Small wave	18.0	1.0	28.5	28.5	6.86	6.87	6.59	95.7	95.8	93.7	26.3	26.3	1.40	1.42	1.64	3	3	3.7		
FC2 M				9.0	27.1	27.1	6.31	6.33		91.7	91.7		27.7	27.7	1.72	1.53		3	3			
FC2 B				17.0	26.4	26.4	6.11	6.09		6.10	88.6		88.1	88.4	28.3	28.3		1.93	1.82		5	5
<b><u>Bold data with single underline indicates an exceedance to Action Level</u></b> <i><u>Italic data with double underline indicates an exceedance to Limit Level!</u></i>																						
Equipment used:		Dissolved Oxygen Meter:		EM	961	Calibration Check:		0mg/L: ok	100%: ok	Sampled By:												
		Turbidity Meter:		EM	2365	Calibration Check:		4.59, 46.8,	470	NTU	Checked By:											
		Salinity Meter:		EM	3694	Calibration Check:		58.8	mS	Date:												
		Thermometer:		ET	961																	

Project: <u>Contract No. CV/2002/13 Fill Bank At Tuen Mun Area 3B</u>										Client: <u>Penta-Ocean Construction Co., Ltd.</u>		Job No.: <u>4494.1</u>								
Date of Sampling :		<u>24/07/2004</u>		Weather Condition:		<u>Sunny</u>		Ambient Temperature, °C:		<u>29</u>		Tide State:		<u>Mid-Ebb</u>						
Station	Time	Sea Condition	Overall Depth, m	Sampling Depth, m	Temperature, °C		Dissolved Oxygen, mg/L			Dissolved Oxygen, %			Salinity, ppt		Turbidity, NTU		Suspended Solids, mg/L		Remarks	
					a	b	a	b	Average	a	b	Average	a	b	a	b	Average			Depth
FM1 S	17:45	Small wave	17.0	1.0	29.5	29.5	6.78	6.75	6.53	97.7	97.8	96.2	27.9	27.9	0.78	0.89	1.17	3	4	4.7
FM1 M				8.5	27.7	27.7	6.31	6.29		94.1	95.0		28.3	28.2	1.69	1.71		5	6	
FM1 B				16.0	26.3	26.3	5.98	5.99		5.99	90.2		90.1	90.2	28.4	28.2		0.94	1.01	
FM2 S	17:55	Small wave	17.0	1.0	29.5	29.5	6.65	6.69	6.55	98.6	97.5	95.7	27.1	27.0	2.27	2.10	1.38	3	4	4.5
FM2 M				8.5	27.3	27.3	6.45	6.39		93.1	93.5		26.8	26.9	0.99	1.01		4	5	
FM2 B				16.0	26.4	26.4	6.01	6.03		6.02	89.3		89.5	89.4	29.1	28.9		0.96	0.95	
FC1 S	17:30	Small wave	22.0	1.0	29.5	29.5	6.41	6.43	6.26	97.4	97.5	95.8	27.7	27.8	2.03	2.13	1.83	4	5	4.7
FC1 M				11.0	26.9	26.8	6.11	6.10		94.1	94.2		27.8	27.2	2.13	2.11		3	4	
FC1 B				21.0	26.1	26.1	6.00	6.00		6.00	88.1		89.0	88.6	26.9	27.1		1.27	1.29	
FC2 S	18:10	Small wave	17.0	1.0	29.5	29.5	6.61	6.62	6.41	98.1	98.2	95.4	27.6	27.7	1.59	1.61	1.75	4	5	5.3
FC2 M				8.5	26.7	26.7	6.20	6.21		92.1	93.0		29.1	28.9	1.18	1.21		3	4	
FC2 B				16.0	26.2	26.2	5.87	5.89		5.88	89.1		88.4	88.8	27.0	27.2		2.43	2.45	
<b><u>Bold data with single underline indicates an exceedance to Action Level</u></b> <i><u>Italic data with double underline indicates an exceedance to Limit Level</u></i>																				
Equipment used:		Dissolved Oxygen Meter:		EM	961	Calibration Check:		0mg/L: ok	100%: ok	Sampled By:										
		Turbidity Meter:		EM	2365	Calibration Check:		4.68, 47.3,	470 NTU	Checked By:										
		Salinity Meter:		EM	3694	Calibration Check:		58.7	mS	Date:										
		Thermometer:		ET	961															

Project: <u>Contract No. CV/2002/13 Fill Bank At Tuen Mun Area 3B</u>										Client: <u>Penta-Ocean Construction Co., Ltd.</u>		Job No.: <u>4494.1</u>									
Date of Sampling :		<u>26/07/2004</u>		Weather Condition:		<u>Sunny</u>		Ambient Temperature, °C:		<u>29.5</u>		Tide State:		<u>Mid-Flood</u>							
Station	Time	Sea Condition	Overall Depth, m	Sampling Depth, m	Temperature, °C		Dissolved Oxygen, mg/L			Dissolved Oxygen, %			Salinity, ppt		Turbidity, NTU			Suspended Solids, mg/L		Remarks	
					a	b	a	b	Average	a	b	Average	a	b	a	b	Average		Depth		
FM1 S	14:25	Small wave	18.0	1.0	29.0	29.1	6.89	6.88	6.67	84.5	86.7	83.9	26.4	26.4	2.42	2.54	2.73	3	3	4.5	
FM1 M				9.0	26.7	26.7	6.45	6.46		82.6	81.7		27.9	27.9	3.13	2.92		4	4		
FM1 B				17.0	24.4	24.5	6.21	6.20		6.21	79.8		79.9	79.9	26.9	26.8		2.73	2.61		6
FM2 S	14:15	Small wave	18.0	1.0	29.1	29.1	6.81	6.81	6.28	88.7	89.8	85.5	27.9	27.9	1.66	1.67	2.62	6	6	6.3	
FM2 M				9.0	26.9	26.9	5.75	5.76		81.7	81.6		28.9	29.1	1.94	1.86		6	6		
FM2 B				17.0	25.7	25.7	5.61	5.62		5.62	78.7		79.8	79.3	30.7	30.8		4.28	4.33		7
FC1 S	14:40	Small wave	23.0	1.0	29.1	29.1	6.92	6.93	6.58	92.3	92.4	91.5	24.9	24.9	2.91	2.68	2.99	4	5	5.2	
FC1 M				11.5	27.1	27.1	6.21	6.24		90.7	90.4		26.6	26.6	3.91	3.87		6	6		
FC1 B				22.0	26.1	26.1	6.01	6.03		6.02	88.4		89.3	88.9	27.8	27.8		2.25	2.33		5
FC2 S	14:05	Small wave	18.0	1.0	29.2	29.2	6.73	6.75	6.52	90.7	91.7	90.1	28.5	28.5	2.57	2.42	2.69	4	5	5.8	
FC2 M				9.0	27.7	27.3	6.30	6.29		88.4	89.5		29.3	29.2	2.21	2.24		5	5		
FC2 B				17.0	25.7	25.7	6.11	6.09		6.10	85.2		84.2	84.7	32.1	32.2		3.25	3.42		8
<b><u>Bold data with single underline indicates an exceedance to Action Level</u></b> <i><u>Italic data with double underline indicates an exceedance to Limit Level!</u></i>																					
Equipment used:		Dissolved Oxygen Meter:		EM	961	Calibration Check:		0mg/L: ok	100%: ok	Sampled By:											
		Turbidity Meter:		EM	2365	Calibration Check:		4.50, 46.0, 462	NTU	Checked By:											
		Salinity Meter:		EM	3694	Calibration Check:		58.6	mS	Date:											
		Thermometer:		ET	961																

Project: <u>Contract No. CV/2002/13 Fill Bank At Tuen Mun Area 3B</u>										Client: <u>Penta-Ocean Construction Co., Ltd.</u>		Job No.: <u>4494.1</u>								
Date of Sampling :		<u>26/07/2004</u>		Weather Condition:		<u>Sunny</u>		Ambient Temperature, °C:		<u>29.5</u>		Tide State:		<u>Mid-Ebb</u>						
Station	Time	Sea Condition	Overall Depth, m	Sampling Depth, m	Temperature, °C		Dissolved Oxygen, mg/L			Dissolved Oxygen, %			Salinity, ppt		Turbidity, NTU		Suspended Solids, mg/L		Remarks	
					a	b	a	b	Average	a	b	Average	a	b	a	b	Average			Depth
FM1 S	08:15	Small wave	17.0	1.0	28.5	28.5	6.95	6.96	6.76	99.7	99.8	97.8	27.4	27.2	2.90	2.89	3.09	7	7	6.0
FM1 M				8.5	27.1	27.2	6.57	6.56	6.56	95.4	96.1	96.1	28.4	28.4	3.49	3.53	3.09	5	5	
FM1 B				16.0	26.3	26.4	6.15	6.16	6.16	89.7	88.1	88.9	29.2	29.2	2.93	2.79	3.09	6	6	
FM2 S	08:25	Small wave	17.0	1.0	28.5	28.5	6.87	6.86	6.68	98.7	97.2	96.1	24.1	24.2	4.30	4.44	3.82	7	6	6.0
FM2 M				8.5	26.9	26.8	6.47	6.51	6.47	94.1	94.4	94.4	28.1	28.2	2.79	2.85	3.82	4	4	
FM2 B				16.0	25.9	25.9	6.21	6.29	6.25	86.7	86.5	86.6	28.1	28.2	4.21	4.32	3.82	7	8	
FC1 S	08:00	Small wave	22.0	1.0	28.5	28.5	6.99	6.96	6.72	98.7	98.5	97.2	24.3	24.4	4.98	4.86	5.70	10	9	8.5
FC1 M				11.0	26.8	26.8	6.46	6.47	6.47	95.4	96.1	96.1	25.7	25.2	8.08	8.41	5.70	11	10	
FC1 B				21.0	25.7	25.7	6.20	6.17	6.19	87.1	87.2	87.2	28.1	28.1	3.76	4.13	5.70	6	5	
FC2 S	08:40	Small wave	17.0	1.0	28.6	28.6	7.02	7.01	6.82	97.4	97.6	96.8	22.3	22.2	2.87	2.86	3.43	5	5	6.8
FC2 M				8.5	26.4	26.4	6.62	6.63	6.63	96.2	95.9	95.9	27.8	27.8	3.65	3.82	3.43	6	6	
FC2 B				16.0	25.2	25.2	6.16	6.15	6.16	89.2	89.3	89.3	27.7	27.7	3.73	3.62	3.43	9	10	
<b><u>Bold data with single underline indicates an exceedance to Action Level</u></b> <i><u>Italic data with double underline indicates an exceedance to Limit Level</u></i>																				
Equipment used:		Dissolved Oxygen Meter:		EM	961	Calibration Check:		0mg/L: ok	100%: ok	Sampled By:										
		Turbidity Meter:		EM	2365	Calibration Check:		4.60, 46.3, 460	NTU	Checked By:										
		Salinity Meter:		EM	3694	Calibration Check:		58.6	mS	Date:										
		Thermometer:		ET	961															



Project: <u>Contract No. CV/2002/13 Fill Bank At Tuen Mun Area 3B</u>										Client: <u>Penta-Ocean Construction Co., Ltd.</u>				Job No.: <u>4494.1</u>							
Date of Sampling: <u>28/07/2004</u>		Weather Condition: <u>Sunny</u>				Ambient Temperature, °C: <u>29</u>				Tide State: <u>Mid-Flood</u>											
Station	Time	Sea Condition	Overall Depth, m	Sampling Depth, m	Temperature, °C		Dissolved Oxygen, mg/L			Dissolved Oxygen, %			Salinity, ppt		Turbidity, NTU		Suspended Solids, mg/L			Remarks	
					a	b	a	b	Average	a	b	Average	a	b	a	b	Average				Depth Average
FM1 S	18:00	Small wave	18.0	1.0	27.9	27.9	6.92	6.93	6.85	99.1	97.3	97.7	25.4	25.4	8.72	8.43	7.31	12	14	11.7	
FM1 M				9.0	26.1	26.1	6.81	6.73		96.1	98.3		26.3	26.4	7.02	7.33		10	11		
FM1 B				17.0	25.9	25.9	6.62	6.45		6.54	94.1		89.3	91.7	26.5	26.5		5.94	6.43		11
FM2 S	17:45	Small wave	18.0	1.0	28.9	28.9	6.89	6.78	6.80	98.3	95.1	96.9	24.5	24.5	4.46	4.12	4.58	9	9	11.5	
FM2 M				9.0	27.0	27.0	6.73	6.81		96.9	97.1		29.9	29.9	3.55	3.51		10	9		
FM2 B				17.0	26.1	26.1	6.93	6.71		6.82	94.3		95.1	94.7	30.5	30.5		5.59	6.23		15
FC1 S	18:15	Small wave	22.0	1.0	28.3	28.3	6.93	6.73	6.82	99.3	98.2	97.8	25.0	25.0	7.97	8.42	8.42	14	14	10.5	
FC1 M				11.0	26.3	26.2	6.81	6.82		97.1	96.4		27.1	27.1	8.25	7.89		8	9		
FC1 B				21.0	25.3	25.3	6.66	6.54		6.60	89.1		88.9	89.0	28.9	28.9		8.50	9.50		9
FC2 S	17:30	Small wave	18.0	1.0	28.1	28.1	6.89	6.93	6.89	98.1	97.3	97.3	25.1	25.2	6.65	6.10	6.52	15	13	12.0	
FC2 M				9.0	26.1	26.0	6.91	6.81		97.3	96.5		25.0	25.0	6.72	7.22		10	12		
FC2 B				17.0	25.1	25.1	6.67	6.83		6.75	94.4		93.1	93.8	27.3	27.3		5.99	6.46		12
<b><u>Bold data with single underline indicates an exceedance to Action Level</u></b> <i><u>Italic data with double underline indicates an exceedance to Limit Level</u></i>																					
Equipment used:		Dissolved Oxygen Meter:		EM	961	Calibration Check:		0mg/L: ok	100%: ok	Sampled By:											
		Turbidity Meter:		EM	2365	Calibration Check:		4.58, 46.8, 468	NTU	Checked By:											
		Salinity Meter:		EM	3694	Calibration Check:		58.8	mS	Date:											
		Thermometer:		ET	961																

Project: Contract No. CV/2002/13 Fill Bank At Tuen Mun Area 38										Client: Penta-Ocean Construction Co., Ltd.			Job No.: 4494.1							
Date of Sampling :		28/07/2004		Weather Condition:		Sunny		Ambient Temperature, °C:		30		Tide State:		Mid-Ebb						
Station	Time	Sea Condition	Overall Depth, m	Sampling Depth, m	Temperature, °C		Dissolved Oxygen, mg/L			Dissolved Oxygen, %			Salinity, ppt		Turbidity, NTU		Suspended Solids, mg/L		Remarks	
					a	b	a	b	Average	a	b	Average	a	b	a	b	Average			Depth
FM1 S	10:15	Small wave	17.0	1.0	27.3	27.3	6.81	6.83	6.73	98.1	99.3	97.9	23.5	23.5	8.90	9.10	7.37	13	13	13.0
FM1 M				8.5	26.9	26.8	6.73	6.56		97.3	96.9		25.1	25.1	6.31	5.81		14	16	
FM1 B				16.0	26.3	26.3	6.31	6.43		6.37	89.1		88.3	88.7	25.2	25.3		6.91	7.21	
FM2 S	10:30	Small wave	17.0	1.0	27.3	27.3	6.91	6.83	6.78	98.3	93.1	95.8	24.8	25.0	3.92	3.91	3.21	8	8	9.2
FM2 M				8.5	26.4	26.4	6.66	6.71		96.3	95.4		29.4	29.4	1.97	2.11		11	11	
FM2 B				16.0	25.1	25.1	6.53	6.42		6.48	95.6		97.1	96.4	30.0	29.9		3.55	3.80	
FC1 S	10:00	Small wave	21.0	1.0	28.9	28.9	6.72	6.89	6.70	99.1	98.9	97.1	23.5	23.6	5.85	5.83	7.13	14	16	13.3
FC1 M				10.5	28.3	28.3	6.61	6.59		94.3	96.2		26.3	26.2	7.47	7.72		11	12	
FC1 B				20.0	25.3	25.3	6.53	6.69		6.61	85.1		88.3	86.7	26.3	26.1		8.05	7.86	
FC2 S	10:45	Small wave	17.0	1.0	28.3	28.3	6.93	6.81	6.79	94.1	95.6	95.8	24.0	24.0	4.27	4.29	5.36	8	8	9.7
FC2 M				8.5	27.1	27.1	6.67	6.73		97.1	96.3		29.0	29.0	6.73	6.92		12	12	
FC2 B				16.0	25.9	25.9	6.59	6.61		6.60	89.1		90.2	89.7	30.7	30.8		4.82	5.13	
<b>Bold data with single underline indicates an exceedance to Action Level</b> <i>Italic data with double underline indicates an exceedance to Limit Level</i>																				
Equipment used:		Dissolved Oxygen Meter:		EM	961	Calibration Check:		0mg/L: ok	100%: ok	Sampled By:										
		Turbidity Meter:		EM	2365	Calibration Check:		4.51, 47.0, 455	NTU	Checked By:										
		Salinity Meter:		EM	3694	Calibration Check:		58.8	mS	Date:										
		Thermometer:		ET	961															

Project: Contract No. CV/2002/13 Fill Bank At Tuen Mun Area 3B										Client: Penta-Ocean Construction Co., Ltd.		Job No.: 4494.1									
Date of Sampling :		30/07/2004		Weather Condition:		Cloudy		Ambient Temperature, °C:		29		Tide State:		Mid-Flood							
Station	Time	Sea Condition	Overall Depth, m	Sampling Depth, m	Temperature, °C		Dissolved Oxygen, mg/L			Dissolved Oxygen, %			Salinity, ppt		Turbidity, NTU			Suspended Solids, mg/L		Remarks	
					a	b	a	b	Average	a	b	Average	a	b	a	b	Average		Depth		
FM1 S	19:45	Small wave	18.0	1.0	27.5	27.5	6.68	6.70	6.70	99.1	98.2	97.9	22.4	22.4	3.95	3.54	6.09	10	12	16.5	
FM1 M				9.0	25.4	25.4	6.77	6.66		97.7	96.4		23.9	23.9	9.68	8.89		14	15		
FM1 B				17.0	24.9	24.9	6.54	6.42		6.48	96.1		95.5	95.8	27.6	27.6		5.25	5.25		25
FM2 S	19:30	Small wave	18.0	1.0	27.8	27.8	6.81	6.73	6.68	98.1	97.2	97.9	22.5	22.5	2.19	2.39	3.74	14	12	13.8	
FM2 M				9.0	25.5	25.5	6.62	6.54		97.7	98.5		23.4	23.4	4.79	5.06		10	10		
FM2 B				17.0	25.0	25.0	6.40	6.61		6.51	94.2		93.3	93.8	25.7	25.7		3.97	4.02		18
FC1 S	20:00	Small wave	22.0	1.0	27.8	27.7	6.78	6.79	6.71	99.1	98.7	98.0	22.1	22.1	2.47	2.68	6.97	8	7	15.5	
FC1 M				11.0	26.8	26.8	6.62	6.65		97.1	96.9		23.4	23.4	8.86	8.77		18	17		
FC1 B				21.0	26.0	26.0	6.54	6.49		6.52	94.4		93.6	94.0	27.6	27.6		9.72	9.33		22
FC2 S	19:15	Small wave	18.0	1.0	27.4	27.5	6.80	6.73	6.69	98.1	97.9	98.4	21.5	21.6	4.42	4.23	5.39	6	5	15.7	
FC2 M				9.0	26.6	26.6	6.58	6.66		99.4	98.2		23.2	23.1	3.50	3.11		18	19		
FC2 B				17.0	25.1	25.1	6.41	6.49		6.45	96.1		95.9	96.0	27.5	27.5		8.53	8.52		24
<b>Bold data with single underline indicates an exceedance to Action Level</b> <i>Italic data with double underline indicates an exceedance to Limit Level!</i>																					
Equipment used:		Dissolved Oxygen Meter:		EM	961	Calibration Check:		0mg/L: ok	100%: ok	Sampled By:											
		Turbidity Meter:		EM	2365	Calibration Check:		4.50, 45.2, 457	NTU	Checked By:											
		Salinity Meter:		EM	3694	Calibration Check:		58.7	mS	Date:											
		Thermometer:		ET	961																

Project: <u>Contract No. CV/2002/13 Fill Bank At Tuen Mun Area 3B</u>										Client: <u>Penta-Ocean Construction Co., Ltd.</u>			Job No.: <u>4494.1</u>								
Date of Sampling: <u>30/07/2004</u>		Weather Condition: <u>Cloudy</u>			Ambient Temperature, °C: <u>29</u>			Tide State: <u>Mid-Ebb</u>													
Station	Time	Sea Condition	Overall Depth, m	Sampling Depth, m	Temperature, °C		Dissolved Oxygen, mg/L			Dissolved Oxygen, %			Salinity, ppt		Turbidity, NTU		Suspended Solids, mg/L		Remarks		
					a	b	a	b	Average	a	b	Average	a	b	a	b	Average			Depth Average	
FM1 S	12:00	Small wave	17.0	1.0	27.1	27.2	6.71	6.70	6.71	99.1	98.8	98.1	21.4	21.4	1.77	1.81	2.28	5	6	16.3	
FM1 M				8.5	26.4	26.4	6.68	6.75		97.4	96.9		23.1	23.2	1.01	1.18		15	16		
FM1 B				16.0	24.2	24.0	6.43	6.49		6.46	96.8		95.3	96.1	27.7	26.9		3.90	4.01		29
FM2 S	12:15	Small wave	17.0	1.0	27.7	27.7	6.80	6.79	6.71	98.4	97.4	98.6	21.2	21.4	2.19	2.27	2.69	10	10	16.3	
FM2 M				8.5	27.2	27.2	6.66	6.59		99.8	98.9		23.3	23.5	2.41	2.63		17	17		
FM2 B				16.0	25.1	25.1	6.52	6.42		6.47	96.6		94.4	95.5	27.7	27.4		3.56	3.10		23
FC1 S	11:45	Small wave	21.0	1.0	27.2	27.3	6.77	6.75	6.69	98.3	97.4	96.9	21.5	21.6	1.79	1.85	2.44	7	8	15.0	
FC1 M				10.5	26.4	26.3	6.64	6.59		96.5	95.4		22.4	22.7	1.85	1.93		16	14		
FC1 B				20.0	24.8	24.7	6.54	6.68		6.61	89.8		88.9	89.4	24.7	24.7		3.60	3.61		24
FC2 S	12:30	Small wave	17.0	1.0	27.9	28.0	6.74	6.68	6.66	99.9	98.2	97.2	21.4	21.1	1.51	1.67	3.02	5	5	13.3	
FC2 M				8.5	26.2	26.2	6.66	6.56		96.1	94.5		22.4	22.4	3.80	4.21		14	15		
FC2 B				16.0	25.4	25.4	6.44	6.49		6.47	89.1		88.4	88.8	26.0	26.0		3.30	3.60		21
<b><u>Bold data with single underline indicates an exceedance to Action Level</u></b> <i><u>Italic data with double underline indicates an exceedance to Limit Level</u></i>																					
Equipment used:		Dissolved Oxygen Meter:		EM	961	Calibration Check:		0mg/L: ok	100%: ok	Sampled By:											
		Turbidity Meter:		EM	2365	Calibration Check:		4.57, 45.8,	452	NTU	Checked By:										
		Salinity Meter:		EM	3694	Calibration Check:		58.7	mS	Date:											
		Thermometer:		ET	961																

**Appendix VII**  
**Complaint Log**



**Appendix VIII**

**Cumulative Statistics on Complaints, Notifications of Summonses and Successful Prosecutions**

<b>CONTRACT No. CV/2002/13 – FILL BANK AT TUEN MUN AREA 38</b>			
<b>Cumulative Statistics on Complaints</b>			
Environmental Parameters	Cumulative No. Brought Forward	No. of Complaints This Month	Cumulative Number to Date
Air	0	---	1
Noise	0	---	0
Water	0	---	0
Waste	1	---	1
Landscape & Visual	0	---	0
Total	0	---	2



**Appendix IX**

**Master Construction Programme**

Three month rolling programme (Mar 2004 - May 2004)

Prepared by: [Handwritten Signature]  
 Reviewed by: [Handwritten Signature]  
 Approved By: [Handwritten Signature] (Lot 1A11 Fines)

ID	Task Name	Duration	Early Start	Early Finish	% Complete	2003												2004					
						May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
1	Commencement of Contract	0d	03/6/2	03/6/2	100%	◆ 6/2																	
2	Contract Completion	0d	05/5/31	05/5/31	0%																		
3	Completion of Section 1	0d	03/9/29	03/9/29	100%	◆ 9/29																	
4	Completion of Section 2	0d	05/5/31	05/5/31	34%																		
5	Handover of Portion A and F	0d	03/6/2	03/6/2	100%	◆ 6/2																	
6	Handover of Portion D	0d	03/6/28	03/6/28	100%	◆ 6/28																	
7	Handover of Portion C	0d	03/6/26	03/6/26	100%	◆ 6/26																	
8	Handover of Portion E	0d	03/6/26	03/6/26	100%	◆ 6/26																	
9	Handover of Portion B	0d	03/5/26	03/6/26	100%	◆ 9/26																	
10	Handover of Portion G	1d	03/10/7	03/10/7	100%	◆ 10/7																	
11	Handover of Portion H1	1d	03/9/19	03/9/19	100%	◆ 9/19																	

Contract No: CV/2002/13  
 Fill Bank at Tuoh Mun Area 3d  
 Date: 1 March 2004



Three month rolling programme (Mar 2004 - May 2004)

Prepared by :  
Reviewed by :  
Approved By :

ID	Task Name	Duration	Early Start	Early Finish	% Complete	2003												2004						
						May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
12	Handover of Portion H	0d	05/3/21	05/11/21	0%																			
13	Preliminaries	813d	03/6/2	06/8/22	35%																			
14	Erection of project signboard	119d	03/7/31	03/11/25	100%																			
15	Provision of initial site office	86d	03/5/2	03/8/6	100%																			
16	Provision and maintenance of temporary access road	634d	03/6/28	05/3/22	34%																			
17	Provision, operation and maintenance of lighting facilities	837d	03/5/26	05/3/22	34%																			
18	Submission and approval of concrete design mix	60d	03/6/2	03/7/31	100%																			
19	Modification of reception facilities	1d	03/6/28	03/6/28	100%																			
20	Engineer's Site Office	753d	03/8/1	05/8/22	27%																			
21	Design submission	107d	03/2/1	03/11/15	100%																			
22	Erection	67d	03/11/16	04/1/21	100%																			

Contract No. CV/2002/13  
Fill Bank at Tuen Mun Area 38  
Date: 1 March 2004

Task  
Progress  
Milestone

Summary  
 Rolled Up Task  
 Rolled Up Milestone

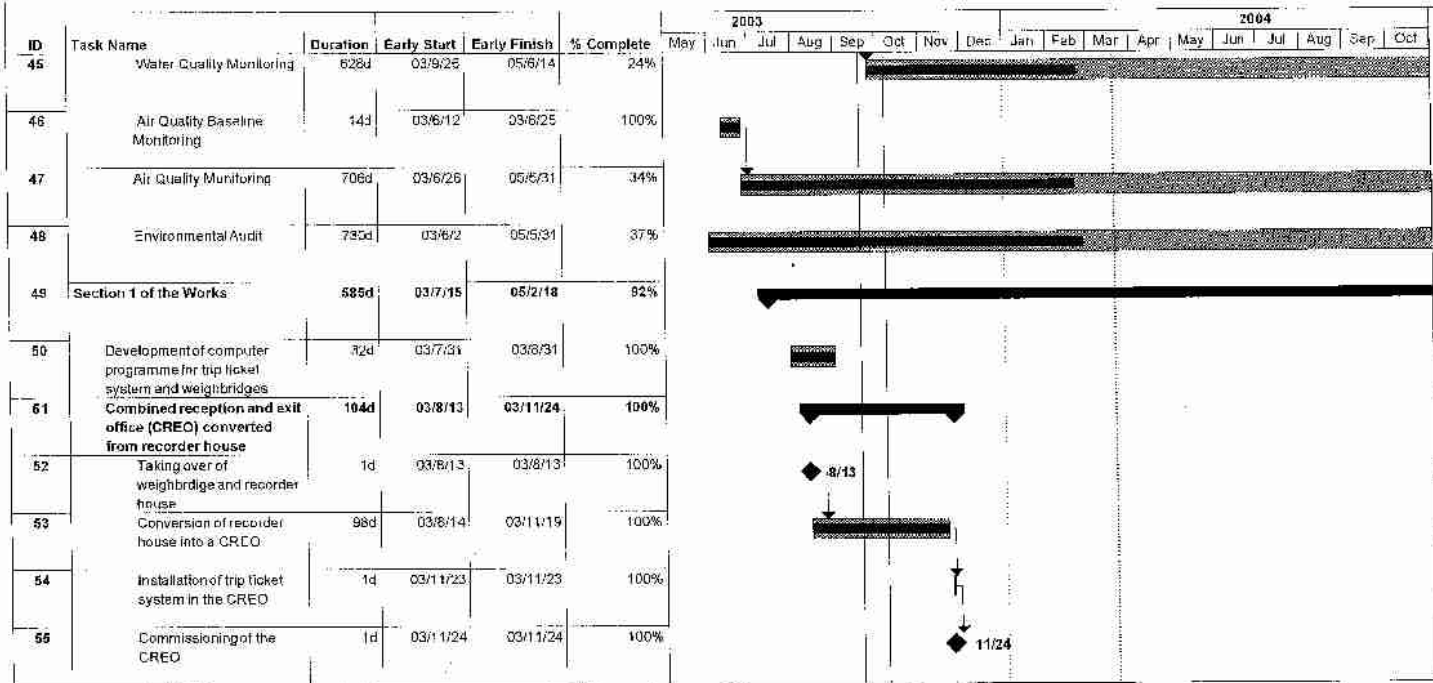
Rolled Up Progress  
 Critical Path  
 Subcritical Path for Each Section





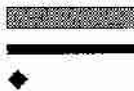
Three month rolling programme (Mar 2004 - May 2004)

Prepared by:  
Reviewed by:  
Approved By:



Contract No. CV/2002/13  
Fill Bank at Tuon Mun Area 38  
Date: 1 March 2004

Task  
Progress  
Milestone



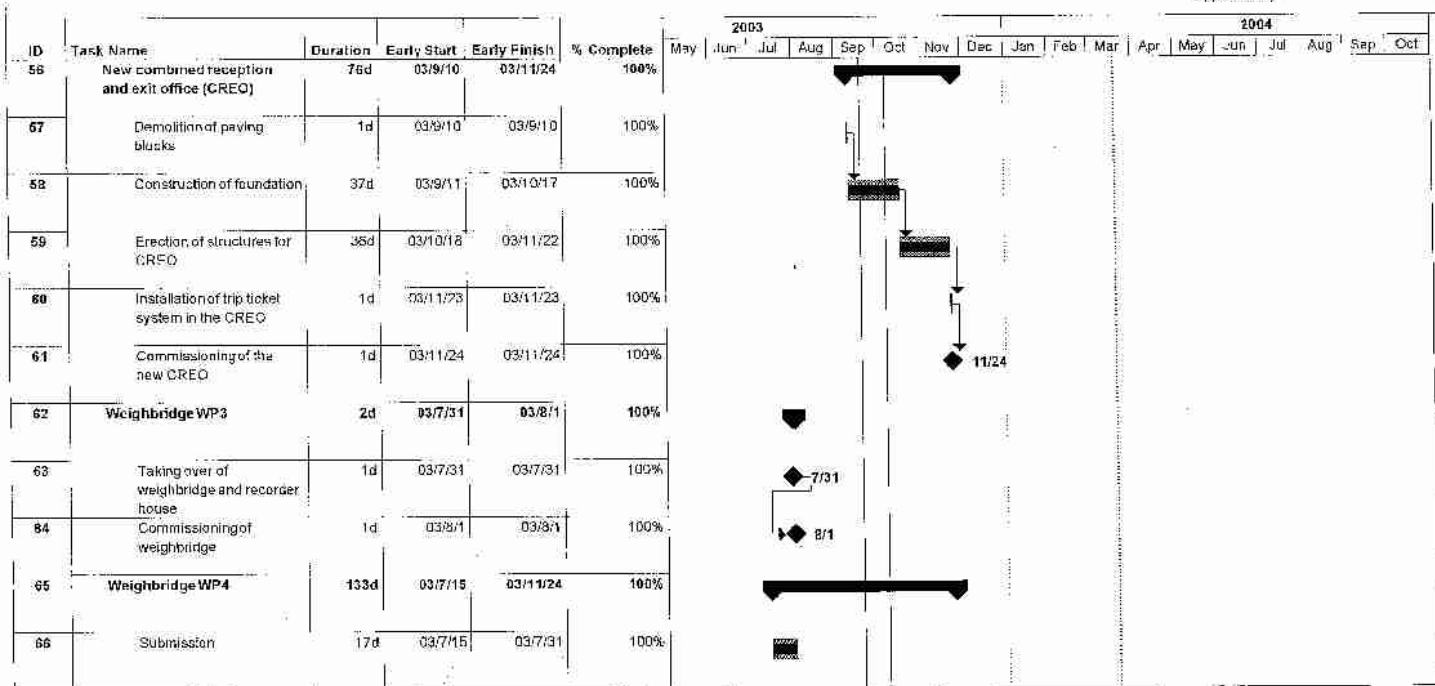
Summary  
Rolled Up Task  
Rolled Up Milestone



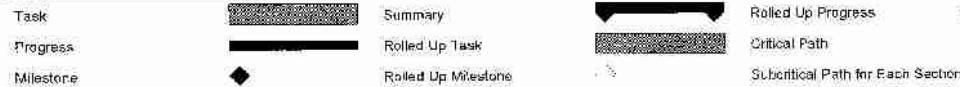
Rolled Up Progress  
Critical Path  
Subcritical Path for Each Section

Three month rolling programme (Mar 2004 - May 2004)

Prepared by :  
Reviewed by :  
Approved by :



Contract No: CV/2002/13  
Fill Bank at Tuohi Mun Area 38  
Date: 1 March 2004

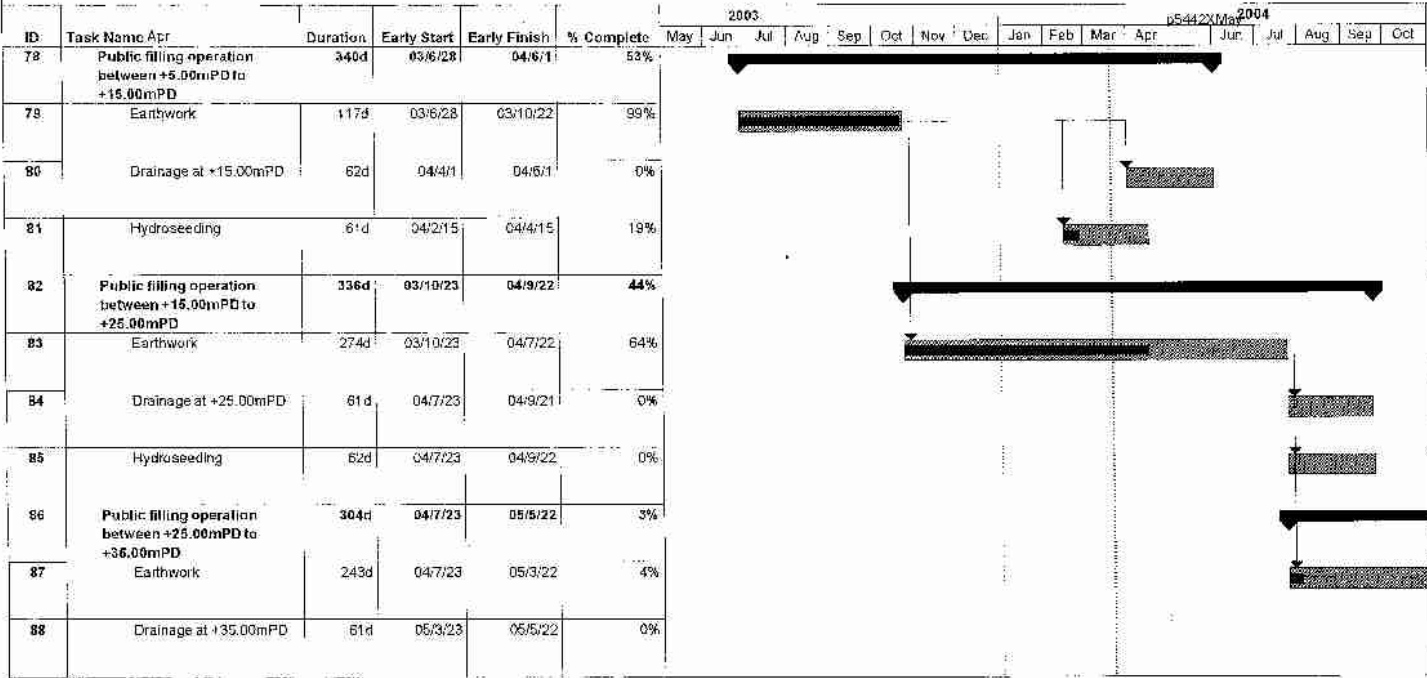






Three month rolling programme (Mar 2004 - May 2004)

Prepared by:  
Reviewed by:  
Approved By:



Contract No. CV/2002/13  
Fill Back at Tuen Mun Area 3B  
Date: 1 March 2004

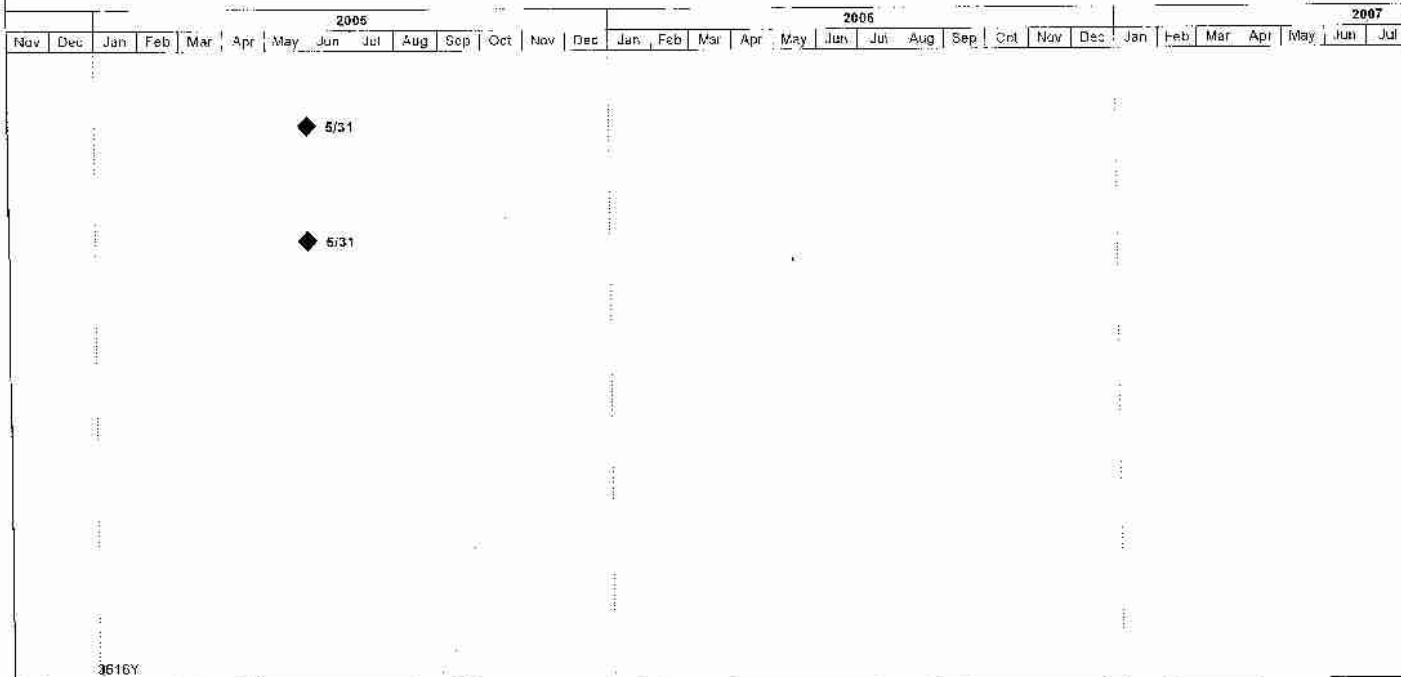
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Progress [dotted line] Rolled Up Task [dotted line]  
Milestone [diamond] Rolled Up Milestone [diamond]

[solid line] Rolled Up Progress [solid line]  
[hatched box] Critical Path [hatched box]  
[dotted line] Subcritical Path for Each Section [dotted line]



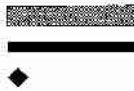
Three month rolling programme (Mar 2004 - May 2004)

Prepared by:  
Reviewed by:  
Approved By:



Contract No: CV/2002/13  
Hill Bank at Tuen Mui Area 38  
Date: 1 March 2004

Task  
Progress  
Milestone



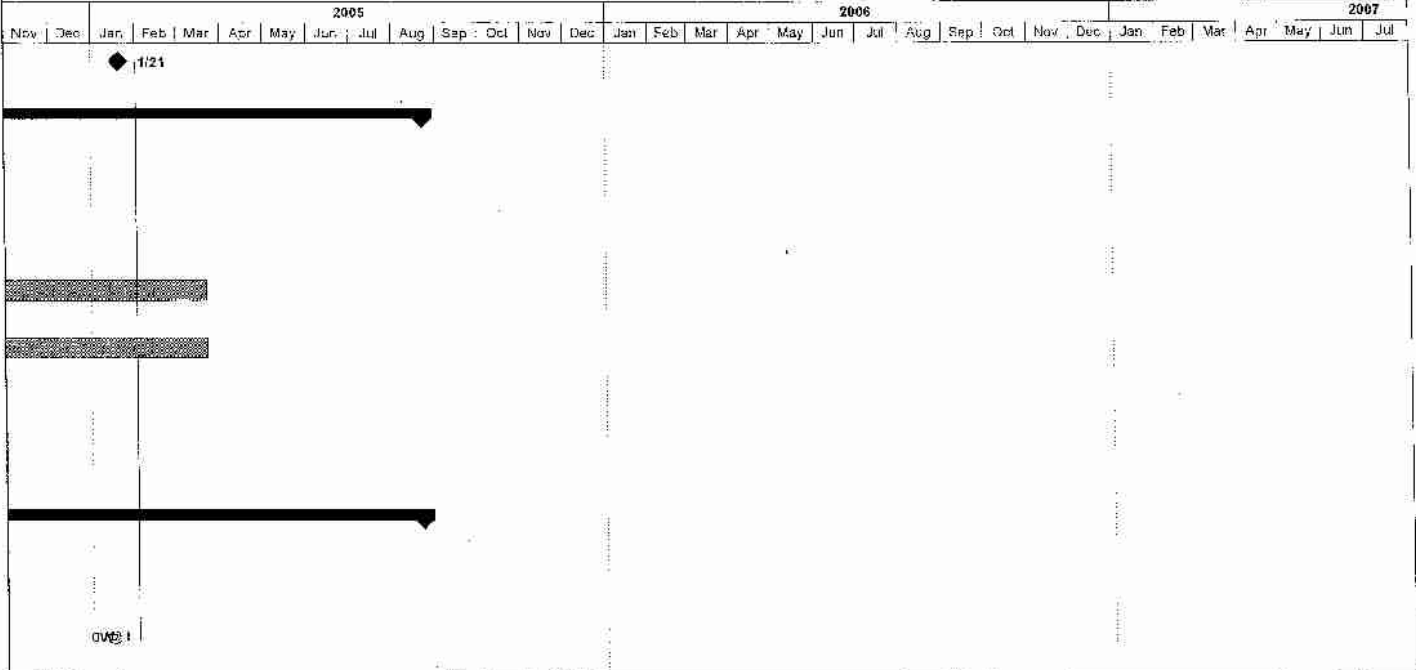
Summary  
Rolled Up Task  
Rolled Up Milestone



Rolled Up Progress  
Critical Path  
Subcritical Path for Each Section

Three month rolling programme (Mar 2004 - May 2004)

Prepared by:  
Reviewed by:  
Approved By:

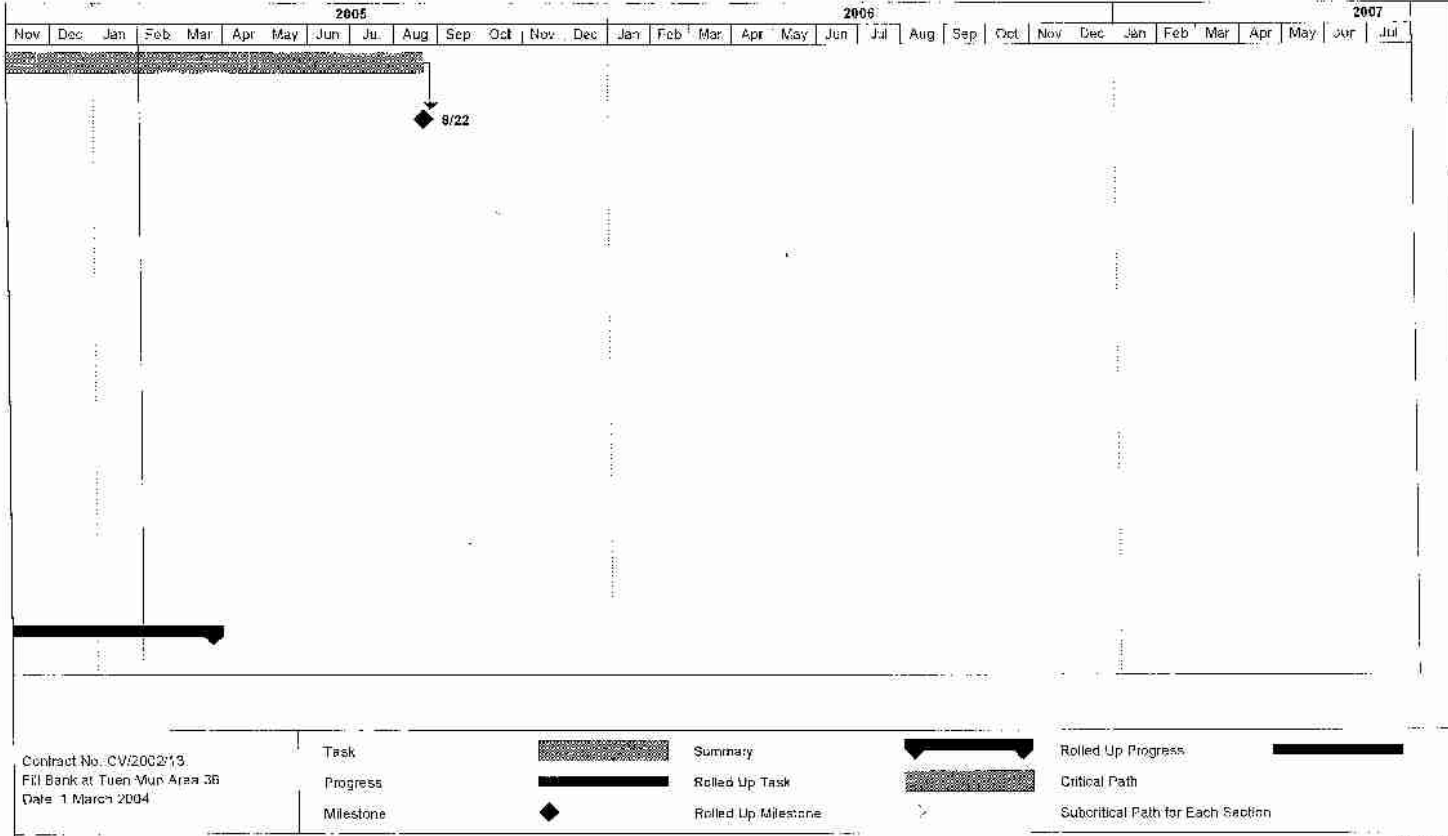


Contract No. CV/2002/13  
Fill Bank at Tuen Mun Area 3B  
Date: 1 March 2004

Task		Summary		Rolled Up Progress	
Progress		Rolled Up Task		Critical Path	
Milestone		Rolled Up Milestone		Subcritical Path for Each Section	

Three month rolling programme (Mar 2004 - May 2004)

Prepared by:  
Reviewed by:  
Approved By:



Contract No.: CV/2002/13  
Fill Bank at Tuen Mun Area 3B  
Date: 1 March 2004

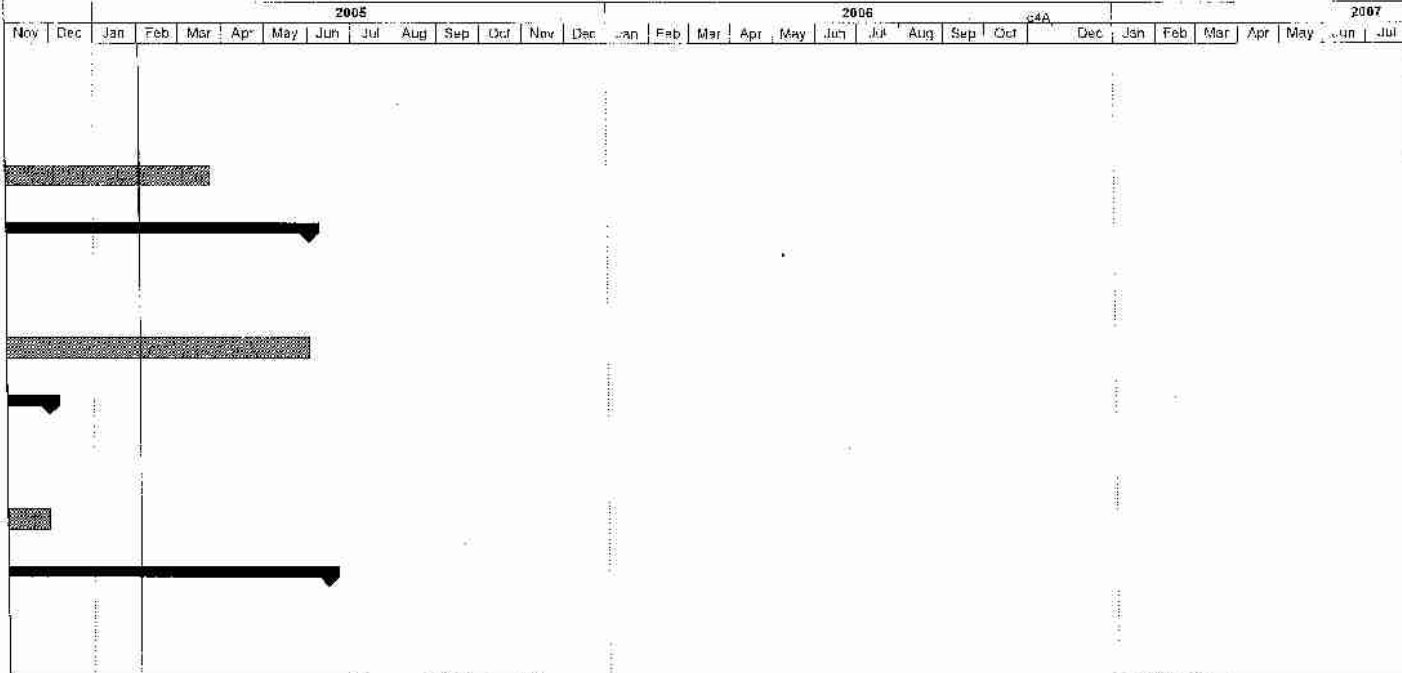
Task  
Progress  
Milestone

Summary  
Rolled Up Task  
Rolled Up Milestone

Rolled Up Progress  
Critical Path  
Subcritical Path for Each Section

Three month rolling programme (Mar 2004 - May 2004)

Prepared by:  
Reviewed by:  
Approved By:



Contract No: CV/2002/13  
Fill Bank at Tuen Mun Area 38  
Date: 1 March 2004

Task  
Progress  
Milestone



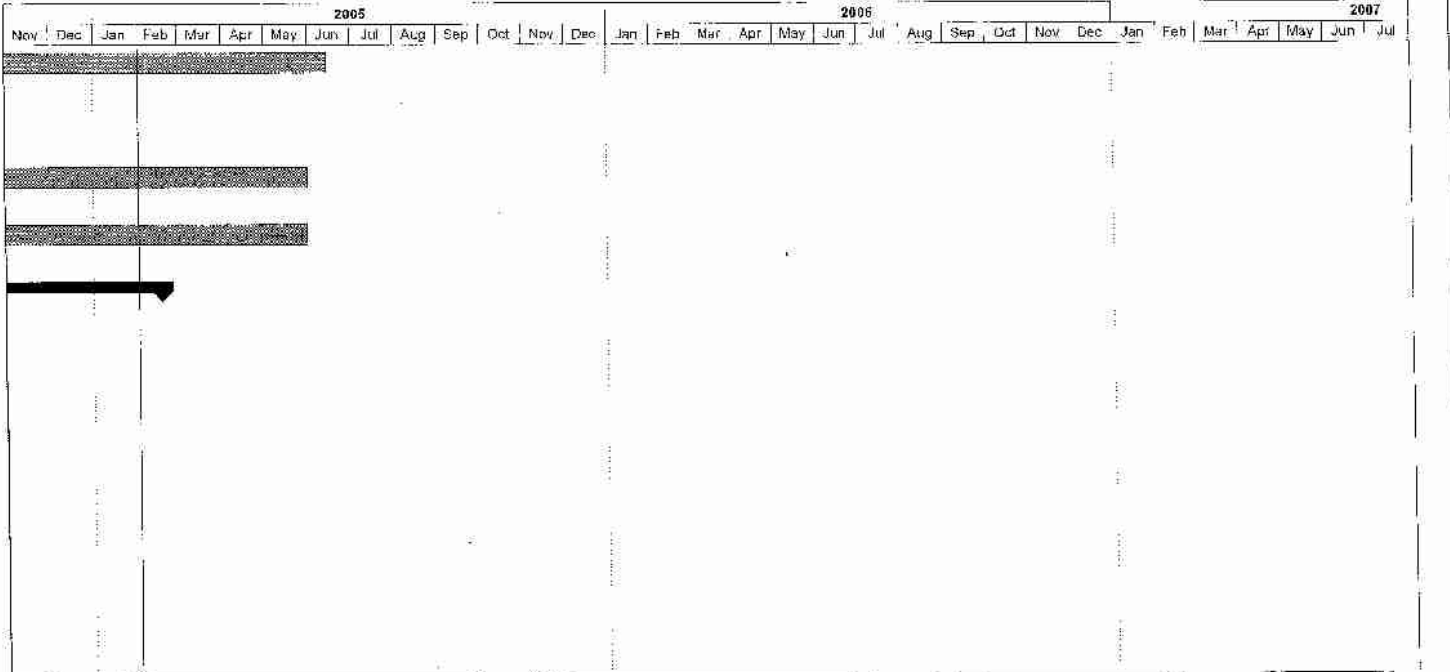
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Rolled Up Task  
Rolled Up Milestone



Rolled Up Progress  
Critical Path  
Subcritical Path for Each Section

Three month rolling programme (Mar 2004 - May 2004)

Prepared by :  
 Reviewed by :  
 Approved By :



Contract No. CV/2002/13  
 Fill Bank at Tuen Mun Area 38  
 Date: 1 March 2004

Task  
 Progress  
 Milestone



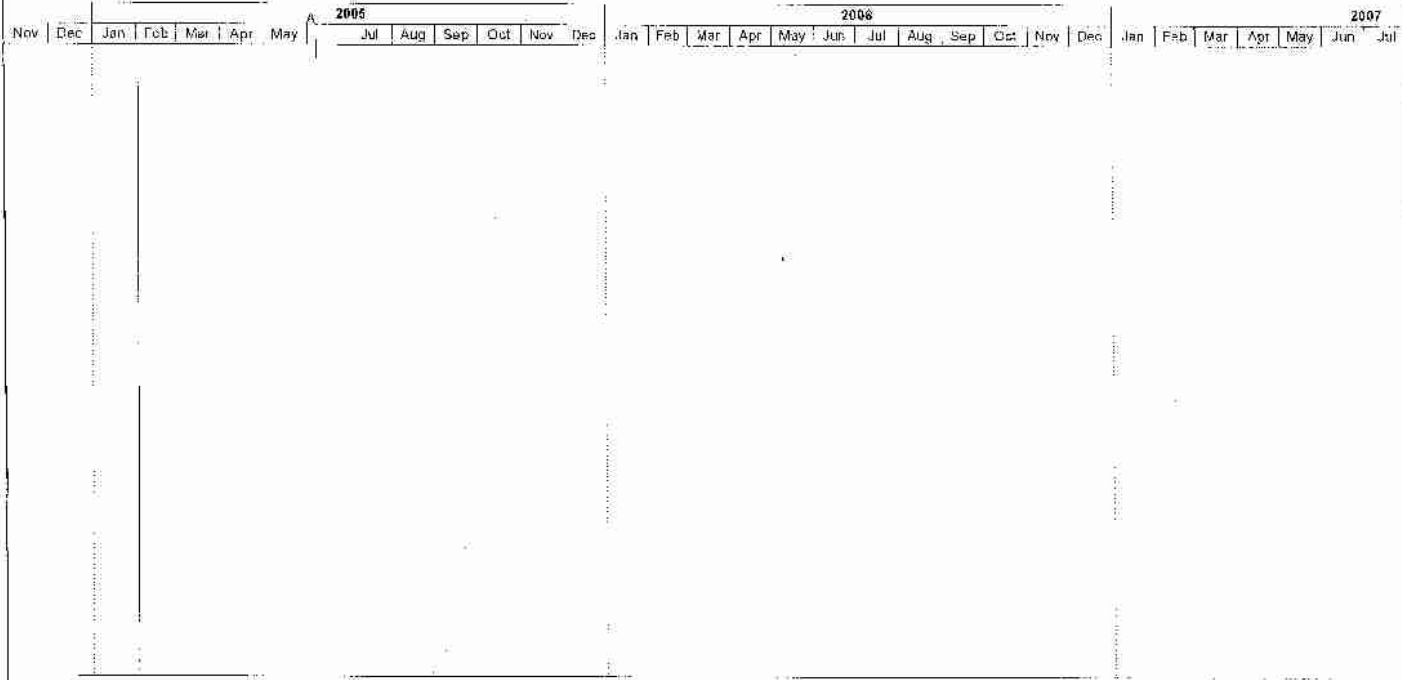
Summary  
 Rolled Up Task  
 Rolled Up Milestone



Rolled Up Progress  
 Critical Path  
 Subcritical Path for Each Sector.

**Three month rolling programme (Mar 2004 - May 2004)**

Prepared by:  
 Reviewed by:  
 Approved By:



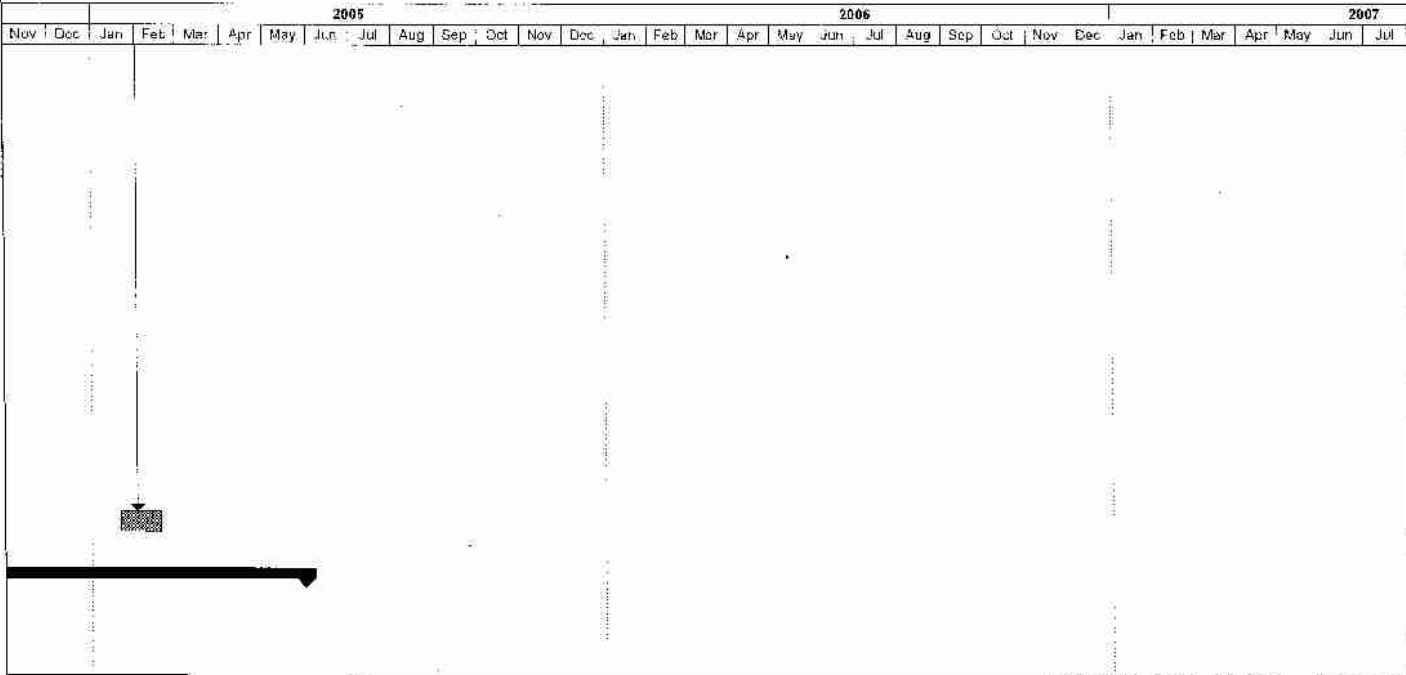
Contract No. CV/2002/13  
 Fill Bank at Tuen Mun Area 30  
 Date: 1 March 2004





**Three month rolling programme (Mar 2004 - May 2004)**

Prepared by:  
Reviewed by:  
Approved By:

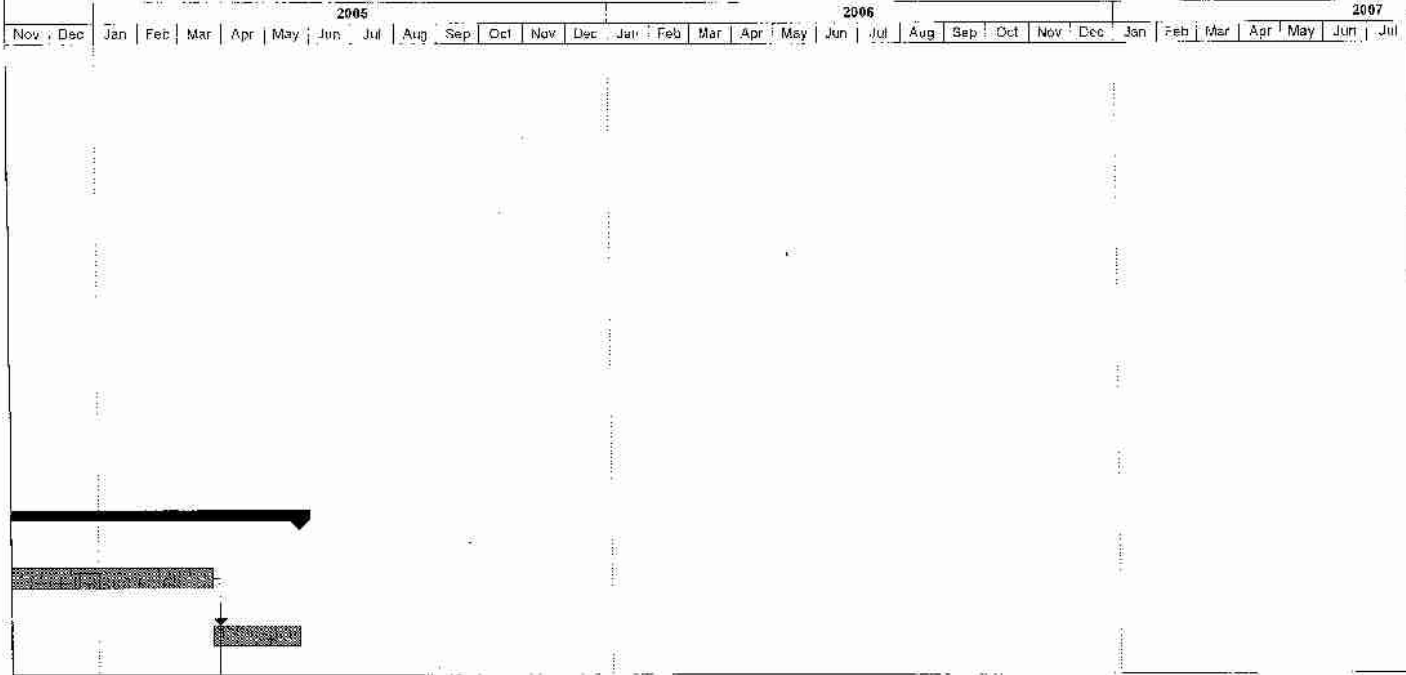


Contract No: CV/2002/13  
 Fil. Bank at Iuen Mun Area 35  
 Date: 1 March 2004

- Task
- Progress
- Milestone
- Summary
- Rolled Up Task
- Rolled Up Milestone
- Rolled Up Progress
- Critical Path
- Subcritical Path for Each Section

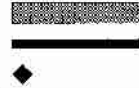
**Three month rolling programme (Mar 2004 - May 2004)**

Prepared by :  
 Reviewed by :  
 Approved By :

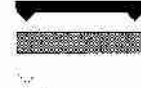


Contract No. CV/2002/13  
 Fill Bank at Tuch Mun Area 35  
 Date: 1 March 2004

Task  
 Progress  
 Milestone



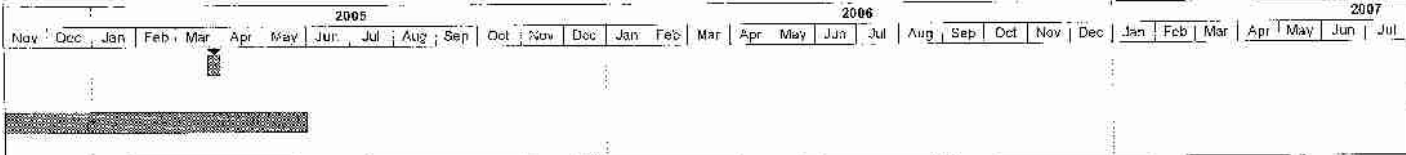
Summary  
 Rolled Up Task  
 Rolled Up Milestone



Rolled Up Progress  
 Critical Path  
 Subcritical Path for Each Section

**Three month rolling programme (Mar 2004 - May 2004)**

Prepared by :  
 Reviewed by :  
 Approved By :



Contract No: CV/2002/13  
 Fill Bank at Tuen Mun Area 38  
 Date: 1 March 2004

Task		Summary		Rolled Up Progress	
Progress		Rolled Up Task		Critical Path	
Milestone		Rolled Up Milestone		Subcritical Path for Each Section	

**Appendix X**

**Monitoring Schedule for the following month**

**Fill Bank at Tuen Mun Area 38**  
**Environmental Monitoring Schedule**  
**August 2004**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
August 1	2	3	4	5	6	7
	WQM (Ebb: 14:16) (Flood: 07:14)		WQM (Ebb: 15:39) (Flood: 08:54)		Site Inspection 1 – hr TSP 24 – hr TSP WQM (Ebb: 16:47) (Flood: 10:33)	
8	9	10	11	12	13	14
	WQM (Ebb: 08:02) (Flood: 14:59)			1 – hr TSP 24 – hr TSP WQM (Ebb: 10:55) (Flood: 18:44)	Site Inspection	WQM (Ebb: 12:16) (Flood: 19:30)
15	16	17	18	19	20	21
	WQM (Ebb: 13:28) (Flood: 06:24)		1- hr TSP 24 – hr TSP WQM (Ebb: 14:34) (Flood: 07:48)		WQM (Ebb: 15:38) (Flood: 09:12) Site Inspection	
22	23	24	25	26	27	28
		1 – hr TSP 24 – hr TSP WQM (Ebb: 06:54) (Flood: 14:40)		WQM (Ebb: 09:39) (Flood: 17:49)	Landscape Audit Site Inspection	WQM (Ebb: 11:37) (Flood: 19:02)
29	30	31				
1 – hr TSP 24 – hr TSP WQM (Ebb: 13:14) (Flood: 06:24)						

- Notes :
1. 24 –hr TSP (to be monitored once every 6 days) at monitoring locations A1 & A2.
  2. 1 hour TSP (to be monitored three times every six days when highest level of dust generation expected) at monitoring locations A1 & A2.
  3. WQM - water quality monitoring three times per week, on mid-flood and mid-ebb tides. Days of monitoring to be separated by at least 36 hours. Monitoring locations FC1, FM1, FM2 & FC2.
  4. Site inspections to be carried out once per week.
  5. Auditing of landscape works to be carried out once per month.

**Appendix XI**

**Wind Speed and Direction Data**

DATE MON	DATE DAY	TIME HR	TIME MIN	WS:AVG M/S	WS:MAX M/S	WD:AVG DEG	WD:SDV DEG
7	2	0	0	2.1	6	261	23
7	2	1	0	3.1	8	287	17
7	2	2	0	2	7	292	21
7	2	3	0	1.1	4	278	44
7	2	4	0	1.3	4	276	31
7	2	5	0	2.2	5	253	29
7	2	6	0	1.6	5	274	25
7	2	7	0	1	2	283	21
7	2	8	0	1.7	5	297	23
7	2	9	0	2	5	274	24
7	2	10	0	2	6	279	25
7	2	11	0	2.3	5	242	33
7	2	12	0	2.4	5	231	21
7	2	13	0	2.8	5	223	21
7	2	14	0	2.8	6	218	23
7	2	15	0	3.8	10	220	24
7	2	16	0	3	8	215	31
7	2	17	0	1.9	5	240	41
7	2	18	0	1.6	5	241	45
7	2	19	0	1.4	4	233	35
7	2	20	0	1	4	289	47
7	2	21	0	2	7	247	46
7	2	22	0	3	9	225	28
7	2	23	0	2.4	10	220	36
7	3	0	0	3	9	217	31
7	3	1	0	3.7	9	222	27
7	3	2	0	3.9	10	226	26
7	3	3	0	3.5	9	223	27
7	3	4	0	4	10	224	23
7	3	5	0	3.6	10	228	23
7	3	6	0	3.6	9	226	24
7	3	7	0	3.5	11	225	24
7	3	8	0	3.8	9	234	19
7	3	9	0	1.8	6	251	34
7	3	10	0	1.2	5	236	44
7	3	11	0	1.2	4	245	46
7	3	12	0	1.2	4	248	35
7	3	13	0	1.1	3	264	36
7	3	14	0	1.6	5	237	36
7	3	15	0	1.4	5	208	44
7	3	16	0	1.8	6	238	31
7	3	17	0	1.9	5	210	44
7	3	18	0	2.4	7	193	39
7	3	19	0	2.6	8	193	36
7	3	20	0	2.3	8	203	39
7	3	21	0	3.1	10	223	28
7	3	22	0	2.7	7	274	28
7	3	23	0	0.7	4	258	52
7	8	0	0	1.3	4	211	33
7	8	1	0	1.4	4	213	29
7	8	2	0	1.6	5	211	29
7	8	3	0	1.7	4	209	29
7	8	4	0	2	6	207	26
7	8	5	0	2	6	208	30
7	8	6	0	1.6	5	197	37
7	8	7	0	1.7	4	173	27
7	8	8	0	1.7	4	178	28
7	8	9	0	1.8	6	202	31
7	8	10	0	2.1	6	207	28
7	8	11	0	2.8	7	219	22
7	8	12	0	2.9	7	217	24
7	8	13	0	2.8	7	218	23
7	8	14	0	2.6	7	206	27
7	8	15	0	3.1	7	221	21
7	8	16	0	2.3	6	208	29
7	8	17	0	2.3	6	213	25
7	8	18	0	2.3	6	216	25
7	8	19	0	1.6	4	206	27
7	8	20	0	1.6	5	207	28
7	8	21	0	1.7	5	217	26
7	8	22	0	1.7	5	212	26
7	8	23	0	1.6	4	219	25
7	9	0	0	1	4	197	35
7	9	1	0	0.9	3	111	76
7	9	2	0	0.6	2	257	88
7	9	3	0	0.6	5	267	82
7	9	4	0	1.7	4	173	28
7	9	5	0	1.6	5	206	27

7	9	6	0	1.4	4	200	35
7	9	7	0	1.4	4	175	21
7	9	8	0	1.4	3	195	26
7	9	9	0	1.8	5	174	32
7	9	10	0	2.6	6	201	30
7	9	11	0	3.2	6	219	21
7	9	12	0	3.1	7	218	22
7	9	13	0	3.4	7	221	20
7	9	14	0	2.8	6	217	21
7	9	15	0	2.8	6	211	22
7	9	16	0	2.8	6	212	24
7	9	17	0	2.9	5	216	19
7	9	18	0	2.3	5	205	27
7	9	19	0	2	4	173	22
7	9	20	0	1.9	4	146	34
7	9	21	0	1.7	3	110	17
7	9	22	0	1.3	3	128	36
7	9	23	0	1.8	4	103	22
7	14	0	0	0.1	1	282	40
7	14	1	0	0.1	1	304	38
7	14	2	0	0.6	2	5	54
7	14	3	0	0.4	1	316	56
7	14	4	0	0.3	1	313	54
7	14	5	0	0.1	1	298	31
7	14	6	0	0.1	1	315	38
7	14	7	0	0.2	1	321	61
7	14	8	0	0.4	2	15	58
7	14	9	0	0.9	2	200	53
7	14	10	0	1.2	3	221	29
7	14	11	0	1.9	4	201	26
7	14	12	0	1.6	4	218	35
7	14	13	0	2.9	6	221	24
7	14	14	0	3.6	7	221	18
7	14	15	0	3	6	219	20
7	14	16	0	2.1	5	148	69
7	14	17	0	2.2	5	171	45
7	14	18	0	2	4	210	27
7	14	19	0	1.8	4	201	28
7	14	20	0	1.8	5	220	24
7	14	21	0	1.4	3	203	32
7	14	22	0	1.1	5	210	31
7	14	23	0	0.9	3	211	27
7	15	0	0	0.7	2	175	28
7	15	1	0	0.3	1	283	48
7	15	2	0	0.2	1	298	54
7	15	3	0	0.7	3	275	44
7	15	4	0	1.2	3	291	18
7	15	5	0	1.1	3	287	19
7	15	6	0	1	2	285	20
7	15	7	0	0.9	2	329	44
7	15	8	0	0.5	2	339	57
7	15	9	0	1.8	4	213	34
7	15	10	0	2.2	5	286	18
7	15	11	0	2.6	5	266	23
7	15	12	0	2.6	6	263	28
7	15	13	0	2.3	5	267	26
7	15	14	0	2.9	6	236	21
7	15	15	0	2.3	5	218	25
7	15	16	0	1.6	4	203	36
7	15	17	0	1.5	4	143	41
7	15	18	0	2.6	6	86	25
7	15	19	0	2.7	6	84	20
7	15	20	0	2.4	5	76	18
7	15	21	0	2.5	5	83	17
7	15	22	0	2.2	5	63	18
7	15	23	0	2.2	5	64	21
7	20	0	0	4.4	8	90	15
7	20	1	0	3.3	7	92	16
7	20	2	0	2.9	6	91	15
7	20	3	0	2.5	6	90	18
7	20	4	0	2.8	6	91	18
7	20	5	0	2.1	7	82	25
7	20	6	0	1.2	3	71	23
7	20	7	0	0.9	3	68	29
7	20	8	0	2.1	7	90	24
7	20	9	0	2.6	6	99	21
7	20	10	0	3.5	7	97	18
7	20	11	0	3.7	8	100	19
7	20	12	0	4.5	10	99	19
7	20	13	0	4.9	11	97	20
7	20	14	0	5.2	13	95	18



7	20	15	0	5.1	13	97	18
7	20	16	0	5.2	10	96	18
7	20	17	0	3.9	8	105	19
7	20	18	0	3.5	7	106	18
7	20	19	0	2.9	6	103	18
7	20	20	0	3.2	6	99	16
7	20	21	0	2.8	6	96	17
7	20	22	0	2.6	5	94	18
7	20	23	0	2.6	5	96	17
7	21	0	0	1.8	4	87	22
7	21	1	0	1.4	3	75	23
7	21	2	0	1.2	3	76	28
7	21	3	0	0.7	3	53	34
7	21	4	0	1	4	36	38
7	21	5	0	0.6	2	51	54
7	21	6	0	0.8	4	68	42
7	21	7	0	1.1	3	58	33
7	21	8	0	1.1	3	66	29
7	21	9	0	1.9	4	99	27
7	21	10	0	2.7	6	101	26
7	21	11	0	3.5	7	103	22
7	21	12	0	3.5	7	105	20
7	21	13	0	4.2	8	108	18
7	21	14	0	3.9	7	107	16
7	21	15	0	3.7	7	106	17
7	21	16	0	3.2	7	106	17
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7	21	18	0	3.1	7	103	18
7	21	19	0	2.6	5	105	17
7	21	20	0	1.7	4	93	21
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7	21	22	0	1.8	4	94	16
7	21	23	0	2.4	5	94	15
7	26	0	0	1.1	3	55	28
7	26	1	0	1.2	4	65	39
7	26	2	0	1.1	4	68	34
7	26	3	0	1.3	5	74	34
7	26	4	0	1.7	5	86	26
7	26	5	0	1	3	60	49
7	26	6	0	0.8	3	62	45
7	26	7	0	0.6	3	37	61
7	26	8	0	1.3	5	58	45
7	26	9	0	1.3	5	44	48
7	26	10	0	2.2	6	109	37
7	26	11	0	2.7	6	107	24
7	26	12	0	3.4	7	106	20
7	26	13	0	4	13	116	24
7	26	14	0	2.3	7	82	29
7	26	15	0	3	7	91	20
7	26	16	0	3.2	7	105	20
7	26	17	0	3	8	103	22
7	26	18	0	3.1	7	94	17
7	26	19	0	3.1	7	98	19
7	26	20	0	2.3	6	87	21
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7	26	22	0	1.6	5	74	31
7	26	23	0	1.8	5	73	34
7	27	0	0	1.6	5	74	27
7	27	1	0	1.4	4	60	30
7	27	2	0	1.4	4	57	28
7	27	3	0	0.9	4	18	45
7	27	4	0	1.2	4	11	31
7	27	5	0	1.6	5	356	24
7	27	6	0	1.2	3	344	16
7	27	7	0	0.9	2	345	32
7	27	8	0	0.2	1	312	35
7	27	9	0	1.7	6	289	38
7	27	10	0	2.8	7	306	22
7	27	11	0	3.4	8	302	23
7	27	12	0	3.2	8	302	23
7	27	13	0	2.4	7	296	29
7	27	14	0	3	8	294	27
7	27	15	0	2	7	337	34
7	27	16	0	1.6	5	310	41
7	27	17	0	1.8	6	334	34
7	27	18	0	1.7	5	32	50
7	27	19	0	1.9	4	72	21
7	27	20	0	2.3	5	66	15
7	27	21	0	2.6	6	73	18
7	27	22	0	2.4	5	74	20
7	27	23	0	1.3	5	129	73

7	31	0	0	1.2	3	67	27
7	31	1	0	1.5	3	66	17
7	31	2	0	1.4	3	77	13
7	31	3	0	0.7	2	56	48
7	31	4	0	0.3	1	7	43
7	31	5	0	0	0	294	30
7	31	6	0	0.4	2	336	48
7	31	7	0	0.6	3	4	60
7	31	8	0	1.1	3	75	29
7	31	9	0	1.7	4	116	23
7	31	10	0	2.1	5	107	22
7	31	11	0	2.1	4	111	23
7	31	12	0	1.8	4	106	41
7	31	13	0	2.1	4	156	20
7	31	14	0	2.7	5	228	40
7	31	15	0	3	5	246	19
7	31	16	0	2.2	4	239	24
7	31	17	0	2.2	4	236	21
7	31	18	0	1.4	3	151	79
7	31	19	0	1.9	4	63	18
7	31	20	0	2.7	5	70	14
7	31	21	0	2.9	5	73	13
7	31	22	0	2.1	4	60	16
7	31	23	0	2.2	4	70	14
8	1	0	0	2	4	63	15
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8	1	2	0	1.6	3	62	14
8	1	3	0	1.8	4	47	14
8	1	4	0	1.8	3	57	16
8	1	5	0	0.9	3	21	51
8	1	6	0	0.1	1	312	33
8	1	7	0	0.1	1	268	45
8	1	8	0	0.3	2	42	38
8	1	9	0	1.1	4	296	80
8	1	10	0	1.6	4	301	47
8	1	11	0	2.2	5	259	37
8	1	12	0	2.6	5	238	24
8	1	13	0	2.7	5	243	25
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8	1	15	0	2.8	5	239	22
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8	1	18	0	2.1	5	265	25
8	1	19	0	1.4	4	282	31
8	1	20	0	1.3	3	325	36
8	1	21	0	1.9	4	67	16
8	1	22	0	2	4	75	12
8	1	23	0	1.5	3	73	17